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WHOOPING-COUGH

A PLEA FOR MORE EFFICIENT PUBLIC REGULATIONS RELATIVE TO THE CONTROL OF THIS MOST SERIOUS AND FATAL DISEASE [*]

JOHN LOVETT MORSE, A.M., M.D.
Associate Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Children's Hospital and at The Infants' Hospital, Boston
BOSTON

According to the mortality statistics compiled by the United States Census Bureau in 1906, from a registration area comprising slightly less than one-half of the population of the United States, there were 6,324 deaths from whooping-cough in that area in children under 5 years of age. The United States *Public Health Reports* show that in 1910 the death rate per hundred thousand was as follows: whooping-cough, 11.4 per cent.; scarlet fever, 11.6 per cent.; measles, 12.3 per cent., and diphtheria, 21.4 per cent.

In order to get some more recent statistics, I wrote to all the state boards of health, asking for the number of deaths from whooping-cough, scarlet fever and diphtheria during the year 1911, and also for those from bronchitis and bronchopneumonia in children under 5 years of age. I also asked for information as to the state regulations regarding notification, quarantine, disinfection and school attendance in relation to whooping-cough. The reports from thirty states show that 6,251 died of whooping-cough, 4,232 from scarlet fever and 9,579 from diphtheria in these states during the year 1911. Three thousand eight hundred and sixty children under 5 years of age died of bronchitis and bronchopneumonia during the same period in eleven states in which 1,216 died of whooping-cough. It is, of course, impossible to know in how many of these cases the bronchitis and bronchopneumonia were secondary to whooping-cough. They were undoubtedly due to it, however, in a considerable proportion of them. These deaths should be added to those from whooping-cough. The relative mortality from whooping-cough, scarlet fever and diphtheria is essentially the same throughout the country, whooping-cough being almost everywhere more fatal than scarlet fever and less fatal than diphtheria. Whooping-cough is an especially serious disease in the Southern states, as is shown by the fact that in North Carolina 736 children died of whooping-cough in 1911 against a total of 447 from scarlet fever, measles and diphtheria combined. The death-rate from whooping-cough in North Carolina in 1911 was 32.2 per cent. against 11.4 per cent. for the whole United States.

I also wrote to the boards of health of a considerable number of cities scattered all over the United States, asking the same questions, and received replies from sixty-one, ranging in size from Livingston, Mont., with a population of 5,000, to New York (Manhattan and Bronx), with a population of 2,760,000. If Chicago and New York are excluded, the relative mortality from the three diseases under consideration is the same as that in the United States as a whole. When they are included, the figures are as follows: whooping-cough, 1,327; scarlet fever, 2,014; diphtheria, 3,539.

There were 6,908 deaths from bronchitis and bronchopneumonia in children under 5 years of age in forty cities in which there were 1,022 deaths from whooping-cough. Although there were many exceptions, the death-rate from whooping-cough was, on the whole, as would be expected, greater in the large cities than in the small.

It hardly seems necessary to give any more statistics to prove what a serious and fatal disease whooping-cough is and to show that, instead of being a trifling affair as it is usually considered to be by the laity, it is a condition of the utmost gravity. "Any disease which kills ten thousand children per annum is," as Rucker says, "a serious one. If bubonic plague were to kill that many children in the United States in one year, the whole world would quarantine against our country. A child dead of whooping-cough is just as dead as a child dead of plague." Certain other points in relation to the mortality are, however, of great importance.

German statistics, covering a period of eleven years, show that the mortality among those attacked with the disease is: Under one year of age, 26.8 per cent.; between 1 and 2 years, 13.8 per cent.; between 2 and 5 years, 3 per cent., and between 5 and 15 years, 1.8 per cent.

Ninety-six per cent. of the 6,324 deaths from whooping-cough in the United States in 1906 were in children under 5 years of age. Fifty-seven per cent. of the fatalities were in the first year, 23 per cent. in the second, 8 per cent. in the third, 4 per cent. in the fourth and 2.5 per cent. in the fifth year. It is a comparatively mild affection in healthy children over 5 years old, and after puberty it is rarely fatal. The importance of these figures will be evident when the measures to be taken to control the disease are considered.

What is being done in this country to limit the spread and diminish the death-rate from this dread disease? Surprisingly little. It is a notifiable disease in only twenty-nine of the forty-three states that answered my inquiry on this point. The health officers of many of these states say, moreover, that very little attention is paid by physicians to the law requiring notification. Isolation is required by law in seven states and "modified" isolation in two others. It is recommended in another, but the secretary of the board of health states that it is rarely enforced. "Some attempt is made at it" in another, while in another authority is given to the counties to isolate it, but the secretary of the board of health states that few counties take advantage of this authority. The disease is placarded in six states, perhaps in more. Thirty-one states do not require isolation.

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[*] Address of the President, Annual Meeting of the American Pediatric Society, Washington, May 5, 1913.

Disinfection after the disease is required by law in four states and "recommended but rarely enforced" in one. "Some attempt is made at it" in another, and in another authority is given to the counties to disinfect, of which authority they do not take advantage. "Modified" disinfection is required in two states. No disinfection is required in thirty-four. The impression obtained from the letters is, however, that both isolation and disinfection are chiefly on paper and that they amount to little or nothing practically.

Two states, at least, have no law forbidding the attendance of children ill with whooping-cough at school. The others forbid attendance at school, but only three of the states from which I received answers have any regulations as to how long they shall be kept out of school. The other children in the family are not allowed to attend school in seven states. They are allowed to attend school in eleven, whether they have had the disease or not; in six, if they have had it, and in two, if the patient is isolated. There is no state regulation as to the attendance of the other children in the family in nine states. I was unable to get definite answers from the others.

The regulations of the cities, both large and small, average better than those of the states. Notification is required in forty-four of the sixty-one cities from which I received replies, but isolation is demanded in but twenty. Judging from the letters, however, the isolation is in many cases very imperfect. Some other cities placard, but do not isolate. Disinfection is required in but five, while it is "advised" in two others.

Strange as it may seem, children with the disease are allowed to go to school in three of the sixty-one cities, two of these cities being in Ohio and one in Mississippi. The other children in the family are allowed to attend school in twenty-seven. They are not allowed to attend school, unless they have had the disease, in ten; unless they have had the disease and live away from home, in two; or until after three weeks from the last exposure, in two. In the others they are not allowed to attend school under any conditions.

There is almost no provision for the hospital treatment of whooping-cough in this country. In New York there is a special ward for children with whooping-cough at Bellevue, but only those having complications are admitted. There are also two isolation cottages, each containing fifteen beds, for whooping-cough at Randall's Island. Six hundred and eight cases were treated there from 1903 to 1912 inclusive, with nineteen deaths, all of them from complications. These wards are not open, but in fair weather the children are kept out of doors as much as possible. There are no special hospitals or hospital wards for the treatment of whooping-cough in Chicago, although cases with complications are sometimes admitted to the contagious department of the Cook County Hospital and there isolated. The Philadelphia General Hospital has a separate section for children with whooping-cough. Boston has no provision for these cases. They are admitted to the isolation hospital in San Francisco, but only the most serious, complicated cases are taken and there is no special whooping-cough pavilion. There is a ward of eight beds devoted entirely to whooping-cough at the Charity Hospital in New Orleans. One pavilion in the new Cincinnati General Hospital is to be arranged exclusively for whooping-cough and at the Johns Hopkins Hospital cases are to be admitted and treated in small isolating rooms. Several of the hospitals in the smaller cities occasionally admit cases of whooping-cough with severe complications to their contagious hospitals and treat them in separate rooms. Most of the general hospitals throughout the country refuse whooping-cough entirely, although some of them at times take severe, complicated cases and treat them in separate rooms. If children with the disease are admitted by mistake, they are sent home, unless so ill that this is not possible, when they are isolated in separate rooms. These, as far as I can find out, are the only provisions made in the United States for the treatment of this disease, which at one time or another affects almost every member of the community and which causes 10,000 or more deaths yearly!

There is no general rule as to the management of children with whooping-cough in outpatient and dispensary clinics. In most clinics the children at their first visit mix freely with the other children in the waiting-room until they are discovered by the physician. In a few, the children are seen by a physician before they go to the waiting-room and many of the cases are then discovered. In the majority of the clinics the children are not allowed to return for treatment, but are referred to district or dispensary physicians. In others they are allowed to return and are "treated on the sidewalk" at the beginning or end of the clinic, or are admitted to separate rooms where they are at once treated and sent home. Judging from what I have seen of outpatient clinics in my own and other cities, the isolation obtained in this way must be very incomplete and very unsatisfactory. In some clinics no attempt whatever is made to separate these patients from the other children in the waiting-room and they are allowed to return as often as they wish. It is hard to imagine any better method for disseminating the disease. In two or three clinics, however, they are treated at an entirely different hour from the other patients.

The precautions taken in other countries to prevent the spread of this disease are but little, if at all, better than those in this country. It is not a notifiable disease in England or Scotland and there is no quarantine or disinfection after it in either country. Children with the disease are not allowed to attend school, the time limit in England being six weeks. The other children are not allowed to attend school, unless they have had the disease and do not attend the lower grades or after a quarantine of twenty-one days. Children with whooping-cough are admitted to the "fever hospitals." Five hundred and seventy cases were treated in the Metropolitan Asylums Board hospitals in 1911, the first year in which this disease was admitted, with a mortality of 12.1 per cent. There is a special ward of eight beds for whooping-cough at the Great Ormond Street Hospital and a special suite of rooms for it at St. Bartholomew's. There is a special clinic for whooping-cough in special rooms, twice a week, at a special time of day, at the Great Ormond Street Hospital, and a special clinic in the afternoon at the Victoria Hospital for Children.

Whooping-cough is a notifiable disease in Austria, but there is practically no quarantine or disinfection. Neither the patients nor other children in the family are allowed to attend school. It is admitted to special wards in some hospitals and to the infectious hospitals, and is treated in special rooms in the outpatient departments. It is not a notifiable disease in Bavaria and there is no quarantine or disinfection after it. The patient is not allowed to attend school. There are no special hospitals and the precautions taken in the outpatient departments are rudimentary. Czerny in Strasburg treats children with whooping-cough in the open wards. It is a notifiable disease in Graz, but there is no quarantine and no disinfection after it. That is, the customs are as varied as they are in this country.

Notification of whooping-cough is voluntary in France. Isolation and disinfection depend on notification. The children are not allowed to return to school until thirty days after the disappearance of the paroxysms. The regulations as to the other children depend on the locality. Children with whooping-cough are admitted to the hospitals and treated in special rooms or in small wards in isolation pavilions. The precautions taken in the outpatient departments are very rudimentary. It is evident, therefore, that the neglect to take proper precautions to prevent the spread of this disease and to provide hospital accommodations for its care is not confined to this country, but is well-nigh universal.

It is self-evident that more should be done to limit the spread of whooping-cough than is now being done and that more strenuous efforts should be made to diminish the terrible mortality from this disease than are now being made. In order to take intelligent measures to limit its spread, it is necessary, however, to know first the nature of the contagion and when and how it is transmitted.

The recent investigations of Mallory have proved conclusively that the Bordet-Gengou bacillus is the cause of whooping-cough and that the organism is present between the cilia of the epithelium lining the trachea and bronchi. This organism is present in the sputum in the catarrhal stage and is most abundant at this time and in the first two or three weeks of the spasmodic stage. It has been found in the sputum as late as the eighth week of the spasmodic stage. It is fair to assume, therefore, that the disease is transmitted by the secretions of the respiratory tract and that, while most contagious during the catarrhal and early weeks of the spasmodic stage, it is also contagious throughout the whole of the spasmodic stage. Kittens, puppies and monkeys may be infected with the disease. This probably happens so seldom under ordinary conditions, however, that infection from animals can, for practical purposes, be disregarded. The Bordet-Gengou bacillus is very easily destroyed outside of the body. Indirect contagion is, therefore, very unusual and of but little importance. The staining of smears of the sputum by proper methods gives reasonably satisfactory results. The isolation and recognition of the organism by cultures is, however, too complicated a procedure for practical everyday use. An agglutination reaction is present in many cases, but is not constant and is usually not very high. Its presence is proof of whooping-cough; its absence does not count much against it. A complement-fixation reaction is present in a considerable proportion of children with whooping-cough and convalescent from it. The frequency of the reaction increases with the duration of the disease. Both of these tests are, however, too difficult of performance to be of practical utility for everyday use. The complement-fixation reaction should be of great service in the recognition of abortive and atypical cases in exceptional circumstances, when such recognition is of great importance.

There is an increase in the total number of white corpuscles with an absolute and relative increase in the number of lymphocytes in the catarrhal stage of whooping-cough. The leukocytosis and lymphocytosis increase with the severity of the disease, reaching their highest point in the paroxysmal stage. There is either no leukocytosis or a leukocytosis with a relative increase in the polynuclear neutrophils in the diseases with which whooping-cough may be confused. This blood-formula is a fairly constant one in whooping-cough and is therefore of considerable assistance in its diagnosis before the appearance of the characteristic whoop. It is, however, not always present and may be absent, if there is some complication which is accompanied by a polynuclear leukocytosis. Due allowance must also be made in infants and young children for the normally high percentage of lymphocytes at this age. While the examination of the blood and sputum will unquestionably be of assistance in limiting the spread of whooping-cough by rendering it possible to recognize it in its early stages and thus to isolate children with it earlier than would otherwise be done, it does not solve the problem, because until the health authorities, physicians and public appreciate the importance and gravity of the disease, such examinations will not be made often enough to make any appreciable difference. In the future, when these facts are recognized, they will undoubtedly be of great assistance.

In the immediate future and probably for many years to come, it is reasonable to suppose that, because of the indefiniteness of the early symptoms and the frequency of mild types of the disease, almost everyone will sooner or later have whooping-cough. This fact, while unfortunate and presumably eventually remediable, is not so serious as it at first sight appears, when it is remembered that about 95 per cent. of the deaths from whooping-cough occur during the first five years and the great majority of these in the first two years. The most important thing, then, is to keep babies and young children from having the disease.

The first step to be taken is to convince physicians and the public in general of the seriousness of whooping-cough in infants and young children and of the importance of protecting them from it. All regulations, no matter how well planned, will be useless until those interested in enforcement are so convinced. They can be convinced only by a campaign of education. This campaign will have to be led by the pediatrists and the United States public health authorities, since they are the only ones who at present seem to appreciate the importance of the subject. When the public and physicians are properly educated, regulation will be relatively simple.

Whooping-cough must be made everywhere a reportable disease and the same penalties imposed for failure to report it as in the case of small-pox, scarlet fever and diphtheria. The house should be placarded and the inmates instructed by the health authorities as to the seriousness of the disease in infancy and the methods to be employed to prevent contagion. The sputum and vomitus should be treated in the same way as in tuberculosis.

The patients should be separated from the other children in the family, if they are under 5 years of age. If such separation is impossible, the patients should be removed by the health authorities to special hospitals provided for the purpose. These hospitals should be constructed on the "shack" plan in order to give the children the maximum amount of fresh air and thus to prevent the development of complications and cross-infection, and so situated that the children can be up and out of doors in suitable weather. There is no reason why children should be isolated in one room and not allowed to go out of doors, provided they are kept away from other children. They ought not to be allowed on the street, but, in order to protect other children in case they do get on the street, they should be required to wear an arm-band of some prescribed color and labeled "whooping-cough" in large letters. They should not be allowed under any circumstances to visit places of public congregation or to travel in public conveyances. Children who fail to observe the quarantine regulations should at once be sent to the hospital by the public authorities, no matter what their circumstances or social position. They should not be released from quarantine until after the cessation of the paroxysmal cough or until at least six weeks have elapsed since the onset, even if the paroxysmal cough has ceased. It is to be hoped that in the future quarantine will be maintained until after the cessation of the paroxysmal cough and the disappearance of the Bordet-Gengou bacillus from the sputum.

The vitality of the Bordet-Gengou bacillus outside of the body being slight, formal disinfection is not necessary. Thorough cleaning and airing of the premises is all that is required.

The other children in the family should not be allowed to attend school unless they have already had the disease or until two weeks have elapsed since the last exposure, provided they are free from catarrhal symptoms. It is possible that this period of two weeks may be too short, the evidence as to the length of the incubation period of whooping-cough being unsatisfactory. Present observations seem to show, however, that it varies between two and ten days. Two weeks should, therefore, be amply sufficient.

Children with catarrhal symptoms, in whom there is any reason to suspect the possibility of whooping-cough, should be excluded from school. It is probable that in the future the examination of the sputum will be used as a test in the same way that the bacteriologic examination of the throat is now used when diphtheria is suspected.

The community should be required to establish hospitals not only to take care of those children that cannot be or are not properly isolated at home, but also to take care of those babies and children ill with the disease that cannot be properly treated in their homes.

It can be confidently predicted that when the physicians and the public understand what whooping-cough really means, when proper regulations for its control are established and enforced and when sufficient hospital accommodations for its care are provided, whooping-cough will cease to be the scourge which it now is.

70 Bay State Road.

The Value of Mouth Inspection in the Treatment of Patients. —Of what avail is it to bombard the stomach with drugs and to diet patients, when the real cause of the symptoms lies in a foul mouth, missing teeth, and filthy bridges and plates? Why prescribe sedative cough-mixtures when a long uvula is the cause of an obstinate cough? Why fill a child with tonics when adenoids and enlarged tonsils are the cause of anemia? The tonsils are the cause of so much constitutional mischief that they should always be examined as a routine process. Especially important is this examination in all cases of articular rheumatism, chronic or even acute nephritis and all cases of sepsis.—Morris Manges in *New York Med. Jour.*

BASIC FUCHSIN IN CHRONIC LEG ULCER *

EUGENE S. MAY, M.D.
OAKLAND, CAL.
AND
M. L. HEIDINGSFELD, M.D.
Professor of Dermatology in the University of Cincinnati; Dermatologist to the Cincinnati Hospital
CINCINNATI

DR. MAY'S REPORT

In a former paper[1] I called attention to the germicidal action of basic fuchsin (Grübler's Fuchsin für Bakterien). In this paper we wish to publish the results obtained in cases of chronic leg ulcer treated with fuchsin ointment. A brief summary, however, of the experimental work will be given before proceeding to the clinical report.

Technic.—With distilled water, carefully weighed quantities of Grübler's Fuchsin für Bakterien were made up in dilutions of 1.0, 0.75, 0.5, 0.25, 0.1, 0.075, 0.05, 0.025, 0.01 and 0.001 per cent. Five c.c. of each of these solutions was run into sterile test-tubes, sterilized in flowing steam in the Arnold sterilizer for fifteen minutes on three successive days and kept in a dark place. The activity of these stock solutions was then tested with the following organisms: *Bacillus typhosus, B. paratyphosus, B. coli communis, B. tuberculosis* (saprophytic strain); staphylococci, *Oidia albicantia* (human throat) and *oidia* from a case of generalized blastomycosis. Solutions of fuchsin, 1:1,000, were found always to be *germicidal,* five minutes being required to kill the microorganisms. Higher dilutions, 1:10,000 to 1:100,000, are only variably active.

Experiments were then made to test the *toxicity* of the dye. With warm 1 per cent. solutions repeated irrigations were made of the urinary bladders of rabbits. Repeated and careful examination of the urine and of microscopic sections of the bladders revealed no irritation or inflammatory changes. Basic fuchsin solutions (1.0 per cent.) were injected into the lumbar subdural spaces of dogs with no toxic effects. These experiments also demonstrated the fact that the dye has *great diffusibility.* Another important fact was also noted, namely, that *the dye does not coagulate albumin.*

The germicidal action, non-toxicity and diffusibility of the dye having been proved, I decided to use it as a general antiseptic and for surgical dressings. Wounds were dressed with gauze soaked in fuchsin solutions (1:1,000) either alone or combined with an ointment made up of fuchsin (1 per cent.). Marked stimulative action was noted. Under the treatment chronic ulcerative processes cleared up with *marked stimulation of the epithelium of the margins* and of the granulation tissues.

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* A report from the Laboratories and Hospital of the University of Cincinnati, in which Dr. E. S. May was formerly clinical instructor and demonstrator in surgery.

* In a previous paper, "The Germicidal Action of Basic Fuchsin" (The Journal A. M. A., April 20, 1912, p. 1174), Dr. E. S. May reported that while he had found "acid" fuchsin devoid of germicidal action "basic" fuchsin had proved strongly germicidal. In regard to the chemical identity of the "basic" fuchsin Dr. May stated that "it is the acetate which is furnished us as basic fuchsin and the hydrochlorid and sulphate as acid, or ordinary fuchsin." As he had no knowledge of the identity of the dye used (Gruebler's *Fuchsin für Bacillen*), and as this identity appeared of first importance, since others might wish to repeat his experiments, The Journal decided to investigate the matter. Inquiry addressed through the American agent, Elmer and Amend, to G. Gruebler & Co., brought the information that "Basic Fuchsin is a mixture of rosanilin and pararosanilin hydrochlorid with the formula of $C_{19}H_{26}N_3ClO_4$." Two specimens of Gruebler's Fuchsin für Bacillen, one sent by Dr. May and the other purchased from Elmer and Amend, as well as a specimen of "Fuchsine Merck Medicinal," which appears to be identical with the Gruebler product, have been examined in the Association Laboratory. All three dyes are in the form of hydrochlorid. Those who wish to repeat the work here reported should bear in mind that the work was done with fuchsin hydrochlorid instead of acetate. The hydrochlorid may be obtained in the form of "Gruebler's Fuchsin f. Bac." and "Fuchsine Merck Medicinal."—Ed.

1. May, E. S.: Germicidal Action of Basic Fuchsin, The Journal A. M. A., April 20, 1912, p. 1174.

From the results of my investigations I concluded that basic fuchsin is not only a non-toxic, very diffusible germicide, but also that it has strong stimulative action on epithelial and granulation tissues.

This combination of properties in the dye suggested that because of the chronicity in leg ulcer, the dye might be of value in treatment of such cases. Accordingly it was tried out on cases of this class on Dr. Heidingsfeld's service in the wards of the Cincinnati Hospital. This series of cases forms the basis of this preliminary report.

REPORT OF DR. HEIDINGSFELD

The investigations on the basic fuchsin described above have led me to investigate the clinical value of this drug in cases of chronic leg ulcer in the dermatologic wards of the Cincinnati Hospital. This institution, drawing from a population of about 500,000 people, freely accepts lying-in, skin and venereal cases and the cases on this service are especially well adapted to investigations of this nature.

About one-third of the patients are affected with chronic leg ulcer of every variety. Their length of residence in the hospital is usually from two to eight to ten years. Usually the ulcers have been present for a longer period of time, few being of less than ten years' standing, many of more than twenty-five years. Hospital residence, however, is not continuous; the patients often improve, leave the hospital for brief periods and resume some of their former duties. As a rule, improvement is merely relative and of a moderate degree and the patients are subsequently readmitted. They come to the hospital after all other curative measures have proved unavailing, the cures resisting the combined efforts of family and dispensary physicians, treatment with patent and proprietary remedies and surgical operations.

Etiology.—The etiology of chronic leg ulcer is almost as varied as the clinical manifestations. Varicose veins or impaired general circulation are the most important predisposing factors, with syphilis, thrombophlebitis and trauma strongly in the background in the majority of cases.

TREATMENT

Under appropriate constitutional and local measures a certain number of cases promptly proceed to cure. Cases of this kind, however, are relatively few in number. From the standpoint of the practitioner, leg ulcers are the most obdurate, refractory and uninteresting class of cases which he is called on to treat.

Gottheil[2] calls attention to an interesting clinical feature of chronic leg ulcer, namely, the very slight tendency on the part of these lesions to cancerous degeneration. It seems remarkable that relatively few leg ulcers show cancerous degeneration, no matter how old the host, how long-standing the process, or how neglected or misdirected the treatment. This seems all the more remarkable because a much slighter degree of such unfavorable influence on a more favorably predisposed region, such as the face, would be followed, almost invariably, by malignant degeneration.

Of the simple inflammations which are uncomplicated with malignancy or the severe infections such as tuberculosis, leprosy, etc., chronic ulcerations of the leg are the most hopeless from the standpoint of therapy. Unless the ulcer is caused by well-defined and easily controlled causes such as syphilis and traumatism, the progress of these cases to recovery is slow and tedious, and the recovery inconstant and unstable.

Like all affections which possess no thoroughly reliable and satisfactory therapy, the literature and text-books recommend a host of measures and therapeutic agents. Most of these are helpful in a certain percentage of cases, but useless in many others. It is needless for me to enter into a detailed description of the many methods which have been described and recommended for the treatment of these cases. It will suffice to state that in the majority of cases considered in this report all forms of applications, mechanical devices and even surgical intervention have been employed with little and only transient improvement. Therefore, any new measure which gave promise of benefiting these cases has been faithfully given a trial. In nearly all of my cases all sorts of ointments have been used, including scarlet-red, pastes, various antiseptic and stimulating powders, lotions, moist compresses, zinc gelatins, elastic bandages, elastic stockings, continuous baths, elevation of the legs, mechanical devices for relieving passive congestion, curettement of ulcers and skin-grafting. In nearly all cases and with nearly all of the remedies temporary improvement was noted. With scarlet-red, temporary improvement was noted in nearly all cases, but the severe inflammatory reactions and dermatitis which followed its applications precluded its further use.

RESULTS OF TREATMENT IN CLINICAL CASES

On March 1, 1912, twenty selected cases of chronic, persistent ulceration of the leg were treated with basic fuchsin in form of an ointment, after the following formula:

Fuchsin (Grübler's Fuchsin für Bakt.)	5 parts
Eucalyptus oil	10 parts
Anhydrous wool fat	100 parts

The ointment was applied daily on a piece of lint and was universally well tolerated. The ulcerations cleaned rapidly, and pus and all evidences of secondary inflammation disappeared promptly with relief of pain. On April 18 ten of the cases were exhibited to the Hospital Clinical Society,[3] where the remarkably clean, healthy appearance of the ulcerations, their change from a deep to a superficial character, and their apparently rapid progress toward recovery elicited favorable comment from the members present. In a few cases, continued use of the remedy over a period of several or more weeks, was followed by a mild, inflammatory reaction and dermatitis, so that it became necessary to discontinue the remedy for a few days and to modify its strength to the following formula:

Fuchsin (Grübler's Fuchsin für Bakt.)	1 part
Petrolatum	5 parts
Anhydrous wool fat	100 parts

This formula has been well tolerated in all cases.

My term of service terminated on June 1, 1912, before I had the opportunity to follow all the cases to complete recovery; in the interim, however, some of the patients were discharged well, and others left of their own volition after marked improvement, but before complete recovery. The remainder were all greatly improved and gave every indication and promise of proceeding to temporary complete recovery.

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[2] Gottheil, W. S.: Cancerous Degeneration in Chronic Leg Ulcer, The Journal A. M. A., July 6, 1912, p. 14.

[3] Cincinnati Lancet-Clinic, 1912, cvii, 606.

When I resumed my service, Oct. 1, 1912, another series of cases was selected and placed on 1 per cent. fuchsin ointment for a four months' period of observation and study. Each ulcer was photographed, and a painstaking history, covering the essential points of each case, was carefully recorded. It was the intention of the investigators to exercise a scrutinous control over as many of these cases as possible, in the hope that the four months of service from October 1 to February 1 would afford ample time to insure their complete clinical recovery. After an interval of four weeks some of the cases showed marked intolerance to the remedy in the form of local inflammatory reaction, discomfort, pain and burning. Nearly all the ulcers cleaned rapidly and showed the same but not as rapid and satisfactory improvement as those treated on March 1, 1912. The remedy was not uniformly well tolerated and the subjective discomfort and secondary inflammatory disturbance was not as promptly and completely relieved as in the first series of cases. Investigation revealed that the hospital was substituting *commercial fuchsin* for Grübler's Fuchsin (für Bakterien),[4] and on my recommendation the patients were withdrawn temporarily from this treatment until the latter specified fuchsin was supplied. It required an interval of several weeks before the change could be effected, which was long enough to influence unfavorably the result of the investigation. While the second series of cases is nothing more than a confirmation of the results following the use of the dye in the first series, it does show very conclusively that fuchsin other than that specified (Grübler's Fuchsin für Bakterien) may be highly irritative and should not be used indiscriminately. The patients showed the same favorable improvement and tolerance as soon as the change from commercial to Grübler's fuchsin was made. In a few instances it is necessary to modify the ointment and to discontinue the remedy temporarily because of symptoms of mild intolerance on the part of some of the patients. I submit the preceding as a preliminary report and hope to be able to present a more detailed and exhaustive account with the next series, covering four months of uninterrupted observation and study.

I am strongly impressed with the belief that in this class of cases basic fuchsin possesses the most satisfying therapeutic efficacy. I heartily recommend the use of this remedy as a routine measure in this class of cases. Other measures such as antisyphilitic treatment, corrective appliances, etc., when particularly indicated, should be employed. If the remedy possesses marked therapeutic efficacy in this hopeless class of cases, it also gives promise of yielding a wide field of usefulness as a therapeutic agent in many directions.

We wish to thank Drs. R. Reed, Charles Reyonlds and Julian Benjamin, *interns of the Cincinnati Hospital*, for friendly and cooperative assistance.

1520 Harrison Street, Oakland—19 West Seventh Street, Cincinnati.

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[4] The fuchsin furnished was probably "fuchsin Sauer."

A Good Surgeon Is Something More than a Mere Skilful Mechanic.—There is no more difficult problem in surgery than that which presents itself in making a proper selection of cases for operation: Anatomic, physiologic and pathologic knowledge, diagnostic acumen, prognostic capacity are all requisites of the good surgeon. *Any one can become a surgical mechanic.* Capable surgeons are not so easily produced.—David Drummond in *Clin. Jour.*

THE TREATMENT OF NEPHRITIS AND ALLIED CONDITIONS *

MARTIN H. FISCHER, M.D.
CINCINNATI

It is now almost two years since the first attempt to utilize the following views was made by James J. Hogan, who relieved a case of acute nephritis with anuria by injecting an alkaline hypertonic sodium chlorid solution. Since that time the simple principles of treatment proposed have been tried on many private and hospital patients, so that it has been possible to arrive at some conclusions regarding their actual value. I wish to discuss this question briefly in the following pages. At the same time, in order to satisfy a number of medical men, I desire to outline in greater detail the method of treatment which will in my judgment insure the best results.

For a detailed statement of my colloid-chemical views on the nature and cause of nephritis I must refer the reader to previous discussions.[1] They may be briefly expressed as follows: All the signs and symptoms of nephritis are colloid-chemical in nature, and in the main are the result of a common cause, the abnormal production or accumulation of acid in the kidney. The action of the acid in making the protein colloids of the kidney go into solution in the urine explains the albuminuria; its action in making the kidney-colloids swell causes the increase in the size of the kidney; its action in precipitating a second colloid makes the change of color (graying) in the kidney. Since the (colloidal) cement-substance that holds the kidney-parenchyma fast to its supporting tissue dissolves more easily than that which binds the cells to one another, the cells slip out of the uriniferous tubules in groups called "casts." The casts may be cellular, granular or hyaline, depending solely on the state of the colloids found in them. This state in its turn is determined by the amount of acid, salt, etc., present in the blood, the kidney or the urine. The changes in the output of water are referable to a disturbance in the normal dynamic relations existing between the concentration of water and acid found in the blood, and the water and acid found in the kidney-parenchyma. The absolute decrease in the amount of dissolved substances secreted is held to be secondary to the absolute decrease in the amount of water secreted by the nephritic kidney. The change in the relative concentration of the dissolved substances in a nephritic urine as compared with the relative concentration of the same substances as observed in normal urine is dependent on changes in the adsorption characteristics of the blood- and kidney-colloids, as influenced by such a change in the composition of the kidney as is determined by an abnormal production or accumulation of acid in this organ.

I maintain that all nephritides are parenchymatous. These may be general (involve the whole kidney), as is the case in the ordinary acute or chronic intoxications; or focal (involve only parts of the kidney), as is the case in the so-called chronic interstitial nephritides associated with cardiovascular disease (primarily contracted kidneys). In the latter, in consequence of changes in the blood-vessels, one fragment after another of the kidney is destroyed and replaced by connective tissue; but between these spots the kidney substance is largely normal, and so the decrease in urinary output, the albuminuria, the casts, etc., may be largely absent.

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* The relief of glaucoma through rectal injections of alkali and salt is discussed in the author's reprints.

*From the Eichberg Laboratory of Physiology in the University of Cincinnati.

[1] Fischer, Martin H.: Edema, New York. 1910, p. 191; Further Remarks on a Colloid-Chemical Analysis of Nephritis, Kolloid Ztschr., 1911, viii, 202; Contributions to a Colloid-Chemical Analysis of Absorption and Secretion (Absorption from Peritoneal Cavity), Kolloid-chem. Beihefte, 1911, ii, 304 (available in English in Cincinnati Lancet-Clinic, 1912, cvii); Practical Points in the Treatment of Nephritis, Ohio State Med. Jour., Aug. 15, 1911; Nephritis (a monograph dealing specifically with this subject), New York, 1912.

I wish to direct attention to two more points in order to render more clear the purpose of my therapy. It is universally held that the generalized edema of a patient is secondary to the kidney disease. This is, in the main, incorrect; for nephrectomized animals either develop no edema at all or only a very slight one as compared with the edema developed, for instance, after the injection of uranium nitrate. I believe that the generalized edema and the edema of the kidney (nephritis) arise simultaneously and from the same cause.

The other point is that there is no free water in the body; it exists in all the tissue- and body-fluids only in combination (as water of hydration) with the various (hydrophilic) colloids present. When any free water appears in the body, it is quickly removed by one of the secretory organs (such as the kidney). Conversely, it is impossible to get any secretion except as we furnish the secreting organ free water.

Text-books list as "causes" of nephritis, excessive muscular work, heart-disease, lung-disease, anemia, carbonmonoxid poisoning, exposure to cold, interference with the blood-supply to all or to a part of the kidney (pressure on the kidney-vessels, arteriosclerosis, thrombosis, embolism), intoxication of the kidney-parenchyma with a toxin, chloroform, ether, arsenic, uranium, chromium, lead, phosphorus, amyl nitrite, etc., restriction of salt consumption or excessive consumption of water low in salts. These all gain their etiologic importance because they represent methods which directly or indirectly make for an abnormal production or accumulation of acid in the kidney.

These remarks will suffice to indicate why I have formulated the general rule for the prophylaxis and treatment of nephritis in the following terms: As far as possible, avoid and combat every condition that favors the abnormal production or accumulation of acid in the kidney. Evidently the pathologic condition of the patient must be taken into consideration in the application of this rule. Naturally an anesthesia nephritis with suppression of urine will call for a more aggressive therapy than nephritis secondary to a slowly progressing arteriosclerosis. If we succeed in getting the first nephritic over his immediate kidney symptoms, we may make a hopeful prognosis, for when he has exhaled his anesthetic he has rid himself of the condition that was responsible for the abnormal acid content in his kidneys. But in the case of the second nephritic so hopeful a prognosis cannot be made, for while we may also benefit him, he continues to carry the original condition that brought him to us—his arteriosclerosis—even after we have treated him.

My rule for the treatment of the threatened or established case of nephritis may be summarized in these words: Give alkali, salts and water. The reasons in brief are as follows: The alkali is given in order to neutralize the acid present in abnormal amount in the kidney and in the other edematous organs of the body. The salts are indicated (and sodium chlorid is no exception) because the various changes induced in the kidney-colloids by acids are counteracted by adding to such acid any salt, even a neutral salt.[2] We need to give water in order to have more of this present in the body than is necessary to saturate all the body-colloids; otherwise we shall have no "free" water left for the secretion of urine.

THE PROPHYLAXIS AND THE TREATMENT OF THE MILDER CASES OF NEPHRITIS

First of all, it is necessary to get as clear a conception as possible of all the factors that conspire toward the production or the maintenance of an abnormal acid content in any case of nephritis.[3] Usually there is more than one factor. To the toxic cause of a scarlatinal nephritis may be added that of inadequate oxidation if the patient develops bronchopneumonia. To the toxic nephritis of a pneumococcus infection, already aggravated by interference with respiration, may be added an additional item if the patient develops a convulsion, and so (through muscular work) produces suddenly an enormous additional amount of acid. The eclamptic who has just managed to drag through the last weeks of pregnancy faces death when the muscular efforts of labor or of a convulsion add more acid to that resulting from the intoxication of pregnancy. The patient with subacute or chronic nephritis, who, with persistent edema, some casts, albumin, and a deficient output of urine, is permitted to walk about the ward, may be keeping up the acid content of his tissues by even such light muscular work.

After we have removed as many of these conditions as possible, we may turn our attention to combating those which we cannot remove. These we must try to render as innocuous as possible. Directly or indirectly, we shall find ourselves face to face here with the necessity of fighting an intoxication. In an infectious disease we wish to keep the concentration of the unknown toxin produced as low as possible. The toxin is responsible for the abnormal production of acid in the cells of the kidney (and other organs), and I hold this to be the direct cause of the nephritis. But it should be recalled that the acid intoxication is itself proportional to the concentration of the acid, and this too we wish to keep as low as possible. This can be done only by giving water. It must be insisted on, moreover, that the administration of water shall be regular, and not left to the haphazard inclination of the patient. A good rule is to give a glass every hour day and night. The night administration of water is as important as that through the day, for the production of toxin does not stop with nightfall.

If the water contains an alkali of some sort, so much the better. The natural or artificial alkaline spring-waters are perhaps most easily borne. If the patient will tolerate it, 0.5 to 1.0 gm. of sodium carbonate or sodium bicarbonate may be added to each glass of such alkaline water or to plain water. Some patients who cannot tolerate the carbonates will take sodium citrate, sodium tartrate, sodium acetate or other salts of a strong base with a weak acid in half-gram or larger doses every hour, either when dissolved in water or in capsules followed by water. Calcium hydroxid can easily be given by mixing lime-water with milk. As the salts of the bivalent metals are particularly active in decreasing the hydration-capacity of the body-colloids, the administration of magnesium oxid or milk of magnesia up to the point where two or three easy movements of the bowels are obtained daily, gives good results. The soluble salts of calcium and strontium, as well as their iodids, acetates, lactates, citrates or tartrates, are also available.

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[2] Fischer, Martin H., and Moore, Gertrude: The Swelling of Fibrin, Am. Jour. Physiol., 1907, xx, 330; Kolloid Ztschr., 1908, v, 197. Fischer, M. H.: Further Experiments on the Swelling of Fibrin, Arch. f. d. ges. Physiol. (Pflüger's), 1908, cxxv, 99, and subsequent papers.

[3] The term "nephritis" is used throughout this paper in its ordinary clinical sense as covering that symptom-complex which is characterized by the appearance of albumin and casts in the urine, by changes in the quantitative output of water and dissolved substances by the kidney, by the development of edema, etc.

The dietary can be made an excellent and natural vehicle for getting alkali and salts into the body. A predominantly vegetable diet means a diet rich in alkali. Instead of restricting the protein intake of the patient as greatly as has been the custom, it is better to allow a moderate protein ration on the condition that the patient will greatly increase his consumption of selected fruits and vegetables. It is well to bear in mind that vegetables and fruits (with the exception of those that are high in oxalic acid) will yield a greater proportion of alkaline and neutral salts when cooked than when raw. The sweet fruits, either raw or cooked, constitute a most agreeable form in which to get an excess of alkali into a patient.

For reasons that I have often discussed, I think that the amount of table-salt should not be restricted, but that, on the contrary, it should be urged on the patient. Food serves as a natural carrier for this. In the form of salt meats and salt fish we can easily get considerable quantities of sodium chlorid into our patient, and if he keeps a salt-shaker at hand he can liberally increase his intake by dusting salt on his vegetables, his fats and such proteins as we allow him. Through the diet alone we can therefore do a great deal to keep the intake of alkali, salts and water high.

Let us now imagine that, in spite of these procedures, the symptoms of the nephritic do not improve or that the symptoms are so severe from the start that alkali by mouth seems inadequate. What are we to do then?

We continue to utilize the gastric route as well as we can, but now make use of the rectum also, in order to get a further absorption of alkali, salt and water. We never seriously consider whether the patient ordinarily drinks distilled water, or tap-water, or a table-water, and from this point of view we might be inclined to ignore the exact composition of the liquid to be injected into his rectum. But it should be remembered that the proper regulation of salt-consumption is accomplished through the "taste" of the individual. If his salt-consumption has been too high, he craves fresh water and so washes out the excess of salts. If, on the other hand, he has lost too great an amount of salt from his tissues, he consumes more salt and makes up the deficit. So when we give a nephritic water by rectum we must try to give him at least enough salt to cover also the washing-out effects that would follow if we gave pure water. Therefore the substitution of a "physiologic" sodium chlorid solution for water, or better still, a "Ringer" solution, is eminently in order.

But a nephritic has other needs than a normal individual. His kidney specifically, and all the rest of his organs generally, are suffering from an abnormal acid content; that is, they have an increased capacity for holding water (an increased tendency to swell). To reduce the edema in the kidney or in the brain, in the optic nerve or in the tissues generally in the nephritic, I therefore try to increase, at least temporarily, the absolute concentration of salt in the whole body. This is best accomplished by using a hypertonic salt solution[4] to which is added an alkali. Obviously when using such a hypertonic solution by rectum (or intravenously) I do not allow any water to be taken by mouth. The patient may wet his mouth to relieve his sense of thirst, but no more; otherwise we should only be reducing the concentration of the solution we are administering.

The following formula works very well:

Sodium carbonate ($Na_2CO_3.10\,H_2O$) ...	10 gm.
Sodium chlorid	14 gm.
Distilled water, enough to make......	1000 c.c

Simple as this formula is, care must be taken in its preparation if good effects are to be expected. Sodium carbonate is used, not bicarbonate. The carbonate is physiologically more effective than the bicarbonate, for one of the acids which are produced in the body is carbonic acid, and sodium bicarbonate is already saturated with this, and in consequence cannot act as a carrier. The chemically pure, crystallized sodium carbonate ($Na_2CO_3.10\,H_2O$) or the monohydrated form ($Na_2CO_3.H_2O$) is to be insisted on. Two other forms of sodium carbonate are found in the market, the dry (Na_2CO_3) and the so-called dry or "dried". The "dried" salt found on the ordinary drug-shelf contains approximately two molecules of water of crystallization ($Na_2CO_3.2\,H_2O$). I am inclined to advise against all except the large crystallized form or the monohydrated form, but *whatever salt is used, its water-of-crystallization content must be remembered, otherwise a solution of a different strength from that which I have found most useful will be obtained.* The proportionate amounts of these four salts that may be used are to each other as their molecular weights, or in definite terms:

10 gm. $Na_2CO_3.10\,H_2O$ (mol. wt. 286, crystallized "salsoda") $=$ 4.95 gm. $Na_2CO_3.2\,H_2O$ (mol. wt. 142, "dried" "salsoda") $=$ 4.33 gm. $Na_2CO_3.H_2O$ (mol. wt. 124, monohydrated "salsoda") $=$ 3.71 gm. Na_2CO_3 (mol. wt. 106, really dry "salsoda").

The sodium-chlorid-sodium-carbonate solution should be made up in *distilled* water and filtered. If the salts used are pure and the whole is properly prepared, the resulting solution is perfectly clear.

Rectal Injection of the Solution.—Unless the patient is mentally incapable of comprehending what we say, it is well to explain to him before an injection is made just what we desire to accomplish and to secure his cooperation. As the solution is hypertonic and contains alkali in addition, it not only irritates the rectum somewhat, but leads temporarily to a secretion of water into the rectum while the salt and alkali are being absorbed.[5] If the patient is made comfortable in bed and if his cooperation is secured, the solution is retained for longer periods of time, or entirely, and a more perfect absorption of the alkali and salt is obtained.

To inject the solution, I make use either of a continuous drip-method, or inject larger quantities at varying intervals of time. It is not necessary first to cleanse the rectum locally, and especially are we *not* to try to accomplish this end by a previous administration of cathartics. Both of these methods only increase the irritability of the rectum.

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[4] The osmotic conception of water absorption has assumed such dominance in the biologic sciences that the word "isotonic" has been made synonymous with "isosmotic," while the words "hypertonic" and "hypotonic" have come to mean, respectively, osmotic concentrations above and below this. As we can no longer uphold the osmotic theory of water absorption by protoplasm, we must again learn to use the words "isotonic," "hypertonic" and "hypotonic" in their original sense, "isotonic" referring to solutions of any substance or substances which allow of no change, "hypertonic" to those permitting a decrease, and "hypotonic" an increase in the volume of the cell, tissue or organ.

[5] No solution is absorbed or secreted "as such," as is usually taught. See Fischer, M. H.: Edema, New York, 1910, p. 200; Kolloid-chem. Beihefte, 1911, ii, 304 (see Note 1) (available in English in Cincinnati Lancet-Clinic, 1912, cvii); Nephritis, New York, 1912, p. 113; Hogan, J. J., and Fischer, M. H.: The Theory and Practice of Perfusion, Kolloid-chem. Beihefte, 1912, iii, 385.

The Fractional Instillation Method.—This is easily accomplished by utilizing the apparatus shown in Figure 1. The solution to be injected is heated to 105 F., and the patient being in position, the catheter is lubricated with petrolatum. Into the funnel are now poured 250 c.c. of the solution, and the stop-cock is temporarily opened so as to drive the air out of the tube and catheter. The catheter is then gently inserted well into the rectum, and the funnel is emptied by again opening the pinch-cock. The short glass tube will inform the operator when the last portions of the mixture are flowing into the rectum, when the hold on the pinch-cock is released. In this way no air will be allowed to enter the rectum and balloon it, and extra irritation from this source will be avoided. The injections may be repeated as often as the symptoms of the patient demand them, or until the patient finds it difficult or impossible to retain them. A period of rest should then be given. If the case is so urgent that this cannot be allowed with safety, then the solution must be given intravenously. (See below.)

Continuous Drip Method.—When the solution is to be given by this method, the arrangement shown in Figure 2 works very well. From 1 to 4 drops a second should enter the rectum. This is about as high a rate of injection as the patient can stand without rejecting the fluid. Roughly, this corresponds to an injection of from 240 c.c. to 960 c. c. per hour.

The injection-fluid is retained best if it is delivered *into the patient* at not less than body temperature, and 110 F. is better. For this reason the thermometer in *D*, located as near the rectum as possible, is of great convenience. As the solution slowly passes out of *A* through the tube, it falls in temperature. The vessel *A* is therefore conveniently filled with the solution at a temperature somewhat above 110 F. Or one can set this vessel into a second one containing warm water, or place the tube *B* in warm water, or cover it with a blanket by way of maintaining the solution at a proper temperature, as convenience and the ingenuity of the medical man dictate. In hospital practice, thermostatic devices heated by electricity or gas may be installed conveniently.

Amount and Time-Interval.—How much of the solution may be given by rectum and how long do we continue with it? The answer to this is found in the condition of the patient. So far as I have been able to observe, no harm can be done by indefinite use of the solution. A full physiologic effect is obtained when the patient is kept free from the various signs and symptoms of nephritis, and the urine is persistently neutral in reaction toward litmus. Such a full effect may be obtained in a day or two, or it may require a week. The symptoms may have cleared entirely even before the saturation of the body with alkali has been carried to the point where the patient secretes a persistently neutral urine. His improvement will by itself suggest a reduction in the number of injections or their entire abandonment.

Individuals differ greatly in their behavior toward these injections. I have seen patients bear them for weeks at a time without complaining and without ever rejecting them. Others will insist from the first that they cannot hold them. In this connection, it is well to point out that if these hypertonic salt-alkali mixtures are retained for any time at all, say even for an hour, they do much good. When at the end of such a period the patient rejects some fluid from the bowel, this is not the same as that which was introduced, simply minus a certain quantity that has been absorbed. Hypertonic sodium chlorid-sodium carbonate mixtures are not absorbed as such. The salt and alkali are absorbed out of the solutions while water is being secreted into the bowel. If the solution is retained even for a short time, the patient will have increased his body-content of alkali and salt, which is the whole purpose of my therapy.

It is well, if possible, in the first twenty-four hours of treatment to have 2 liters (about 2 quarts) of the solution retained by the patient. For a few hours after starting the injection it is well to give but little water by mouth, in order to exert as great a shrinking effect as possible on all the tissues. But as soon as the urinary output begins to increase and rise toward a more normal point, I urge the patient to drink water, so as to have free water available for urine. I find good practitioners overlooking the importance of this point constantly. While some water is introduced with the hypertonic salt solution, most of the "free water" that is lost through the kidney after absorption of the hypertonic solution has been taken from the tissues (which may be edematous). But it is self-evident that this robbing of the tissues can go on only for a limited time. Then we have to supply water from the outside if we wish to keep up the urinary secretion.

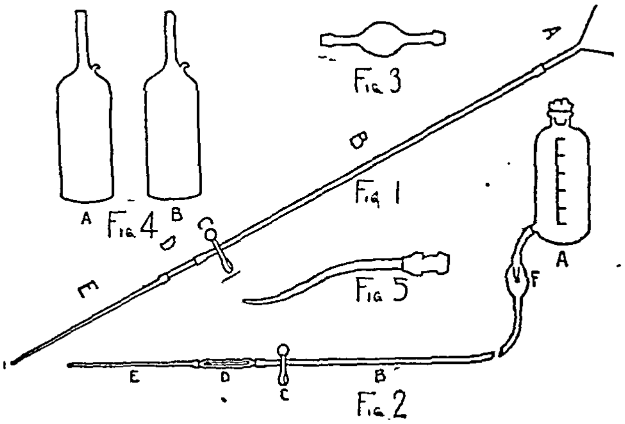

Fig. 1.—Apparatus for fractional instillation method of injecting rectal solution. *A*, funnel with capacity of not less than 250 c.c.; *B*, soft rubber tube at the lower end of which is the pinch-clamp *C*; *D*, short glass tube that connects *B* with the soft rubber catheter or rectal tube *E*.

Fig. 2.—Apparatus for continuous drip method of injecting rectal solution. *A*, ordinary half-liter or liter graduated irrigating vessel with a side tubulation. It connects through the rubber tube *B*, carrying a pinch-cock *C*, with the glass insert *D*, in which lies a thermometer. The insert connects with the soft rubber catheter or rectal tube *E*. *F*, glass insert which permits us to observe the rate at which solution is dripping into the rectum.

Fig. 3.—Bulb insert filled with sterilized glass wool for rectal or intravenous injection of salt-alkali solution.

Fig. 4.—*A*, Ampule for holding sterile salt-alkali solution; *B*, Ampule sealed in a flame.

Fig. 5.—Cannula to be connected with apparatus for injecting solution into vein.

If for any reason it is not possible to feed enough water by mouth, then we can use the rectum. After the kidneys are functioning in a more normal way, we may substitute for the hypertonic solution one more nearly isotonic with the body-fluids. A "physiologic" salt solution (0.85 per cent. to 0.90 per cent. sodium chlorid) does very well, though the following mixture is better, for it gives the much needed alkali as well as the water.

Sodium carbonate ($Na_2CO_3.10\,H_2O$) ...	10 gm.
Sodium chlorid	7 gm.
Distilled water enough to make......	1000 c.c.

This solution may be injected in indefinite amounts and gives rise to no rectal irritation. But since it is not hypertonic, it does not produce so marked or so rapid general effects as we seek in the more acute manifestations of nephritis.

The desire to introduce into the nephritic the bivalent metals which would dehydrate his body-colloids far more than do the univalent metals that are used cannot be easily satisfied. The reason for this is obvious. Their hydroxids are largely insoluble, and so the administration of bivalent metals such as calcium or magnesium along with carbonates or hydroxids is impossible. The only schemes that I have found of service are limited to patients with mild nephritis and to patients who are recovering from the severer types, when lime-water may be added to the milk consumed by the patient; or he may be given magnesium oxid, milk of magnesia and soluble calcium or strontium salts by mouth. For rectal injection a "physiologic," 0.85 per cent., sodium chlorid solution to which not more than 0.1 per cent. calcium chlorid is added also works very well if alkaline solutions have not been used for some hours previously.

THE TREATMENT OF SEVERE CASES OF NEPHRITIS

Under this heading I shall consider those patients in whom we encounter such especially alarming signs and symptoms as great or complete suppression of urine, rapidly progressing optic nerve changes, persistent headache and nausea, vomiting, convulsions, stupor and coma, great quantities of albumin in the urine, etc.

While I realize that a complete explanation of the nature and of the cause of these various clinical signs cannot be summed up in any brief statement, I believe that an essential, if not the essential element in all of them is an edema of the affected part. This edema is represented physico-chemically by an increased swelling on the part of the colloids of the tissues involved, and as responsible for such an increased swelling we hold the abnormal production or accumulation of acid in the part, either alone or in conjunction with such other substances as are also capable of increasing the hydration-capacity of the tissue-colloids. Or, to repeat what I have already often emphasized, what are called the serious complications of nephritis are not really complications secondary to this pathologic entity, but are manifestations in other organs of the body of the [illegible] thing which in the kidney we call nephritis. The lesions in other organs are as primary as those in the kidney. Just as we [illegible] the nephritis is in large measure an edema of the kidney, so the optic nerve swelling and the "retinitis" of nephritis are edema of the optic nerve and of the retina; the [illegible]logic headache, convulsions and coma are manifestations of an edema of the brain; the persistent nausea and vomiting of central origin are manifestations of an edema of the medulla; and the generalized edema is an expression in the body-tissues of that which in the kidney we call nephritis. The same intoxication underlies all these changes, and it is mere accident, not immediately analyzable, that one nephritic will show particularly prominent eye-symptoms, another a great generalized edema, while a third will call us to his side because of a convulsion. For any one of a number of reasons, the edema may become particularly prominent in his optic apparatus, or in his body-tissues generally, or in his brain. If these facts are borne in mind, it will serve to indicate why I believe that any or all of these conditions demand the same general treatment, and why, if I succeed in combating a particularly prominent one, I find that I have succeeded in combating all the rest as well.

Whether the particularly alarming symptoms spring from the kidney itself (a suppression of urine, a great albuminuria, etc.), or whether they spring from the brain (convulsions, stupor, coma), the eye ("papillitis," "retinitis," partial blindness), or the medulla (nausea and vomiting), the purpose of my therapy is the same—I wish to stop and reduce the swelling of the involved tissues. Naturally the best and quickest way to do this is to inject something into the blood; what this something must be I have already discussed.

The Preparation and Sterilization of the Salt-Alkali Solution.—The first formula already recommended does very well. It is well to have this solution ready for immediate use, for its preparation in sterile form takes time, and the need for it when it arises is urgent. What I have already said regarding its chemical ingredients holds here also. The finished solution as injected into the patient must be perfectly clear and sterile. Simple as it would seem to obtain this result, it is not always obtained even when its preparation is left to trained helpers. Therefore I may be pardoned for detailing the following rules for its preparation in containers that make it available for immediate use.

Trouble arises from the fact that alkaline solutions cannot long be kept in contact with ordinary glass containers without reacting with the glass and so leading to a separation of insoluble silicates. Jena glass flasks resist better than other material, and so the finished solution may be sterilized and kept in these. For this purpose, it is only necessary to dissolve the sodium chlorid and the sodium carbonate in the necessary amount of freshly distilled water, and filter the solution through moistened filter-paper (in order to get no shreds into the solution) into thoroughly cleaned Jena flasks which have been rinsed in distilled water. It is convenient to have 2 liters of solution in each flask. The flasks are stoppered with gauze-wrapped cotton stoppers, and may be sterilized in the ordinary way by boiling. This scheme works well in hospitals or wherever storage-room is plentiful.

When needed for injection, this solution may be poured into any one of the properly sterilized intravenous injection apparatus that abound in the market. If the solutions show a precipitate in spite of the use of Jena glass containers, the clear solution may be decanted or the whole may be filtered through a sterilized funnel into the neck of which has been forced a little sterile glass wool. Or a sterilized glass bulb insert of the type shown in Figure 3 into which has been forced some glass wool may be used in the delivery tube of the injection apparatus. As the carbonates and hydroxids of the polyvalent metals are all insoluble, every piece of any injection-apparatus must be rinsed and sterilized only in distilled water. When ordinary tap-water is used, calcium and magnesium precipitates cloud the injection-mixture.

I have found it best to make up the sodium chlorid-sodium carbonate solution in ampules and then mix this concentrated solution with enough freshly distilled water to yield the proper injection-mixture at the time this is needed. One proceeds as follows: Any desired number of multiples of 10 gm. of sodium carbonate ($Na_2CO_3.10\,H_2O$) and 14 gm. of sodium chlorid are dissolved in enough water to make 60 c.c. of finished solution. This solution is filtered and then sterilized by boiling.[6] One or more ampules of the type shown in Figure 4, *A*, and of about 60 c.c. capacity (if these are not available, bottles will do as well), are thoroughly cleaned, rinsed in distilled water and then boiled in distilled water to sterilize them. Into each of these, 60 c.c. of the concentrated sodium carbonate-sodium chlorid mixture are then filtered through a small sterilized funnel plugged with glass wool. When the ampules have been filled, they are sealed in a flame as in Figure 4, *B*. If bottles are used they are corked with sterile corks, and over these is fastened a sterilized paper hood to protect the necks from contamination. When an intravenous injection is to be given, an ampule is taken, its neck is nicked with a file, and this and the lateral bead are cleaned with alcohol, and broken off. The contents are then poured into 940 c.c. of freshly distilled water, care being taken to mix the whole so that the specifically heavier salt solution may not simply settle to the bottom.

After many trials I have found this the best way to proceed; and as dispensing pharmacists in any community are willing to carry these ampules in stock, one can easily obtain fresh and clean solutions at all times. If a precipitate of silicates should be found in an ampule, one can readily avoid pouring this into the injection-apparatus, or one may filter the contents of the ampule through a little glass wool.

Technic of the Intravenous Injection of the Solution.—The experience of the past year has convinced me that it is best in making these injections to cut through the skin and expose the vein to be used clearly to view. The results are bad if one fails in his attempt to enter a vein with a hypodermic needle through the skin. The salt-alkali mixture produces a great destruction of the tissues if it is by accident injected into them.

A vein that is deemed sufficiently large is sought in the arm, in the leg, or if necessary, in the neck. As we may wish to make several injections it is advisable to pick for the first injections the prominent veins most distant from the heart. Unfortunately, in many of the conditions in which we wish to use the sodium chlorid-sodium carbonate solution, not much choice is allowed us, for the blood-vessels are so much contracted (toxemic shock?) that it is often impossible to find any usable vein below the bend of the elbow. Even here, surgeons have been unable to find the median basilic in such cases. This will explain to the reader why in extreme cases, such a vein as the jugular needs to be and has been used.

To expose the vein painlessly a few drops of a cocain or a novocain solution may be injected into the skin. If the patient is stuporous or in coma this is of course needless. The vein is freed from its surroundings and a ligature is tied about its distal end. A second ligature is thrown about the vein, and after a cut has been made into the vein and the cannula connected with the injecting apparatus has been inserted, this ligature is tied. Care is of course taken to have no air enter the vein.

The best type of cannula to use is shown in Figure 5. The two openings at the tip and laterally make it well-nigh impossible to shut off the infusion-stream by crowding the cannula against the wall of the vein. The tapering character of the cannula allows one to push it into even a small-calibered vein, and the corrugation holds the cannula in place when the second ligature is tied.

Sometimes it is better to use a large hypodermic needle in place of the cannula. The first ligature about the exposed vein then serves to steady the vein when the needle is pushed into it. When the hypodermic needle is used it is simply held in place until the injection is completed. As can easily be imagined, the use of the needle is especially convenient if one works with such a vein as the jugular. The disadvantages in its use arise from the fact that one is likely at any time to injure the blood-vessel if the patient moves, and from the further fact that the carbonate solution affects the coat of the vein and so tends to leak out about the needle after the injection is kept up for some time.

As I have already mentioned, any of the various apparatus on the market for intravenous injection may be used to give the alkaline hypertonic sodium chlorid solution intravenously. The medical attendant should choose the apparatus with which he is most familiar.

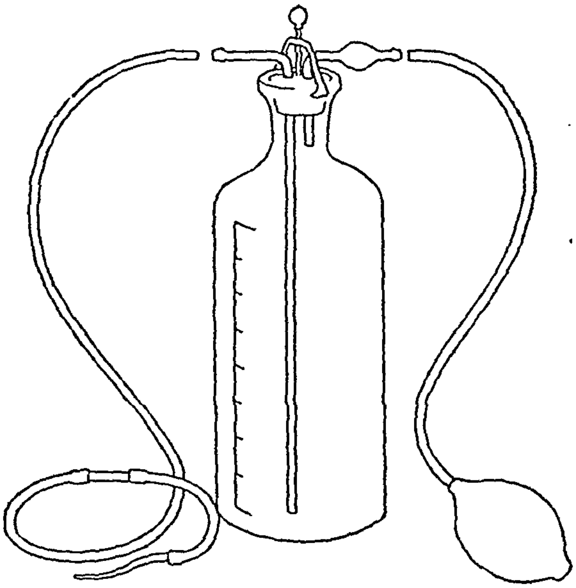

Fig. 6.—Pressure-bottle apparatus for injecting solution into vein.

Perhaps that shown in Figure 2, with a cannula replacing the catheter and minus the thermometer and the insert *F*, is the simplest available form. The side tubulation with the rounded bottom or a glass bulb insert filled with glass wool (Fig. 3) will make it almost impossible, if care is used, to inject any sediment that may accidentally appear in the injection-fluid. The rate of inflow must be slow, and is conveniently regulated by gravity. The pressure-bottle arrangement shown in Figure 6 possesses some advantages over the apparatus just referred to. No special comment is necessary regarding its use, and I need not in this day emphasize the necessity of having all rubber tubes, etc., perfectly sterilized by boiling in distilled water.

The faults of the apparatus shown in Figure 6 are that it possesses no arrangement for keeping the solution at body-temperature, and that we do not know in as accurate a manner as we desire the exact rate and the exact pressure at which the sodium chlorid-sodium carbonate solution is entering our patient at any moment.

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[6] In my book on nephritis, and in a paper or two, I have cautioned against the use of excessive heat in sterilizing these carbonate solutions. The caution I find was scarcely necessary, for at the ordinary temperatures and pressures at which such sterilization is carried out, the carbonate is not decomposed.

To meet these difficulties, the very useful apparatus shown in Figure 7 was devised by Edmund M. Baehr. We have here again the same glass pressure-bottle already shown in Figure 6, but this is surrounded by a copper water-jacket by means of which the injection fluid may be kept at body-temperature or a little above it. The thermometer registers the temperature existing in the jacket, and as the temperature of the injection-fluid falls on its way into the patient, it is advantageously kept from 3 to 5 degrees above the temperature at which we wish to deliver the solution into the patient. The rubber bulb shown in Figure 6 is advantageously replaced in the apparatus shown in Figure 7 by a metallic pump; a mercury manometer, inserted as indicated in the drawing, allows one to know at all times the exact pressure obtaining in the pressure-bottle.

The solution should always be injected slowly into the circulation so that it may mix with the blood, and at as even a rate as possible. Not over from 30 to 40 c.c. should be injected per minute. By testing out the apparatus before making the injection it is easy to note just how much pressure is necessary to accomplish this. As the pressure in the larger veins is almost nil, from 30 to 40 mm. of mercury-pressure usually suffice, and one need never run above 50 mm. if a cannula or needle of proper diameter is chosen. If the solution is given to a patient who for any reason has to maintain an upright position, it is well to remember that in such a case the arm must be comfortably supported in as horizontal a position as possible in order not to have to work against a considerable hydrostatic pressure in the veins. The pressure and the oscillations of the mercury-column indicate every moment whether the solution is flowing in properly or not.

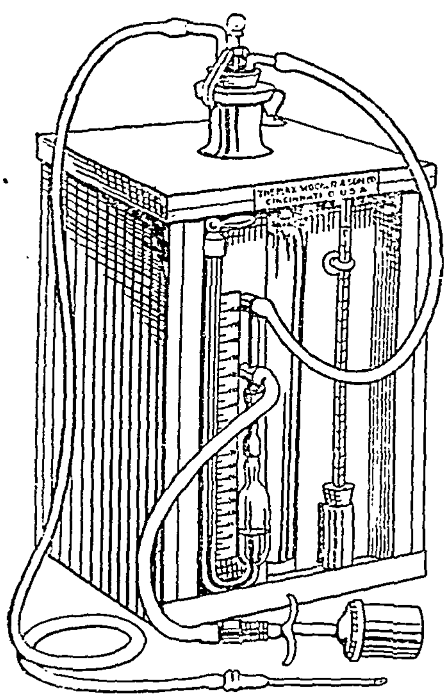

Fig. 7.—Apparatus to keeping solution at body-temperature.

The Quantity and Time-Interval of the Salt-Alkali Injections.—It is necessary to say now how much of the solution may be injected at one time and how often the injection may be repeated. In any case of suppression or in a case with convulsions, persistent vomiting or other alarming symptoms, from 1.800 to 2,000 c.c. of the solution should be given for the first dose. In the case of a child I give a proportionate dose obtained by dividing the child's weight by that of a small adult. A child of 30 kg. (66 pounds) is given half the dose of a man weighing 60 kg., etc. The repetition of the injection and the amount given subsequently must then be determined by the condition of the patient. If within two or three hours urine begins to come and the convulsions stop, or if the sensorium clears or the headache and eye-symptoms improve, enough has been given for the time being.

If the patient is awake, he is likely to complain of thirst during the injection. It is best not to let him satisfy his thirst immediately for the reasons that I have already discussed. If the redevelopment of some prominent symptom indicates that the patient is relapsing into his previous state, then a second injection of 1 or even 2 liters of solution may be given six, twelve, or twenty-four hours after the first injection. Closer rules than this can hardly be given. If the patient improves for a number of hours after the first injection, and then goes down again, repeat the injection at this time. From 500 to 1,500 c.c. in any twenty-four hours after the first injection is certainly safe.

If the suppression of urine is not absolute, then it is a useful guide as to the amount of alkali and salt that may be urged on the patient. It is safe to give alkali, and it should be given until the urine is *persistently* neutral or slightly alkaline to litmus. For self-evident reasons, it is possible for the urine to be alkaline immediately after an intravenous injection, even when the acid content of the body generally is still abnormally high. Not until the urine is persistently neutral, therefore, can we say that we have really succeeded in getting an adequate amount of alkali into the patient.

Various observers have commented on the large quantity of fluid that is injected intravenously in clinical cases of nephritis and allied conditions. I have injected as high as 4 liters (4 quarts) in twenty-four hours. Some clinicians have for various reasons remonstrated that this is dangerous, chiefly on mechanical grounds, and because this "throws work on the heart." In so far as the elimination of water from the body costs energy, this is to a limited extent true, but only to a very limited extent, as I have previously insisted. Physiologists know that the volume of circulating blood can be more than doubled without appreciable effect. Counting the blood in the human being as one thirteenth the body-weight, it is therefore entirely safe to inject a liter of fluid for every 13 kg. (about 28½ pounds) of body-weight; but as I have pointed out elsewhere,[7] this is a safe figure if blood, in other words water in combination with a colloid, is injected. Only such remains in the blood-vessels. When the water is injected "free," as in a salt solution, this rapidly leaves the blood-vessels, and so the amount of this that may be safely injected lies still higher. What I have said here is still largely true even when we deal with sclerosed blood-vessels, though to allow for the diminished elasticity of the blood-vessels in such cases a slower injection or injection of a less amount at more frequent intervals, as the judgment of the operator may dictate, may advantageously replace the single large injections.

About one in every three patients injected with alkaline hypertonic salt solution develops some reaction. At times he develops a chill which, however, does not last long, or he has a slight rise in temperature. Once I found sugar in the urine. It will be noticed that these findings are similar to those observed after intravenous injections of salvarsan and other medicaments. European authors have laid stress on the distilled water employed in making up the solutions, maintaining that bacterial products are present in old distilled water. For this reason I have always urged the use of freshly distilled water, but even then I have seen these reactions.

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[7] Fischer, M. H.: Edema, New York, 1910, p. 184; Nephritis, New York, 1912, p. 193; Kolloid-chem. Beihefte, 1911, ii, 304 (see Note 1). Hogan and Fischer: Kolloid-chem. Beihefte, 1912, iii, 385.

I next attributed the effect to the action of the alkali on the red blood-corpuscles, and a resulting hemolysis. This, however, can only be a small part of it, for one of the worst reactions I ever saw occurred in a woman to whom I gave a concentrated solution of neutral salt only. To explain the findings—which are now being studied on laboratory animals—I have come to the tentative conclusion that two things are active: first, a shrinking of the red blood-corpuscles which makes these less able to carry oxygen; second, a more important direct action of the salt and alkali on the medulla. The latter effect, I think, leads to the vasomotor disturbance in the skin which we call a chill, to the consequent retention of heat that accounts for the rise in temperature, and to the appearance of sugar in the urine, as Bock and Hoffmann[8] found many years ago when rabbits were perfused with sodium chlorid solutions. How to avoid these effects is not yet entirely clear to me. The rules that I have formulated for my own guidance call for the use of freshly distilled water and as slow an injection as is conveniently possible. It is undoubtedly better to give in place of single large intravenous injections several smaller ones separated by intervals of time which allow the salt and alkali to diffuse into the body-tissues, but unfortunately the necessity of opening into more than one vein and the critical condition which we are usually asked to meet does not always allow of this. Before, throughout and after the injection the patient is carefully protected from muscular exertion, and the possibility of a chill is guarded against by extra blankets, hot-water bags, etc. If complete muscular and mental relaxation is not easily obtained, a *small* dose of codein, heroin or morphin may be used.

CLINICAL RESULTS AND COMMENT

In the light of the considerations in the earlier paragraphs of this paper it will not surprise any one that the acuter forms of nephritis which we observe after various intoxications are usually easily relieved by giving alkali and salt in sufficient concentration. While at first sight it seems rather strange that a woman in a pregnancy-intoxication with little or no urine, with great quantities of albumin and casts, with constant headache and nausea, with partial blindness, with convulsions and coma perhaps, ceases her convulsions, comes out of her coma, says that her headache and nausea are better and shows an improvement in the urinary output within a few hours after an intravenous injection of an alkaline hypertonic salt solution, there is really nothing strange about it. If I am correct in maintaining that these various signs and symptoms represent from the side of various organs the same series of colloidal changes which in the kidney are called nephritis, and if I have correctly analyzed these colloidal changes as being of the nature that are induced through an abnormal production or accumulation of acid in these various organs (in its turn all brought about by the same poison circulating through all the organs of the body), then it is to be expected that the alkali and salt which will relieve the signs and symptoms referable to one of these organs must also relieve those referable to any other.

It is obvious that on such a basis an anesthesia-nephritis must be easily relieved when alkali and salt are introduced into the body. During an anesthesia we introduce into the body a poison which interferes with the normal oxidation chemistry in nearly all the cells; and that we have an abnormal production and accumulation of acid in the body following this is attested to not only by the thirst of which the patient complains, but by the accelerated breathing and heart-beat, the abnormally high acid (hydrogen ion) content of postanesthetic urine, and the appearance in it of such "acidosis" products as acetone, diacetic acid, lactic acid, etc. As soon as we stop administering the anesthetic the patient begins to exhale this; therefore, in a comparatively short time the intoxication responsible for the abnormal production and accumulation of acid in the body disappears.

The patient also usually succeeds in oxidizing the acid products resulting from his intoxication, so that it is the usual thing to see a patient bear his anesthesia without bad after-effects. Sometimes, however, he is not so successful in overcoming the effects of his anesthesia, and then if his intoxication evidences itself chiefly by symptoms referable to his kidneys, we say he has a postoperative nephritis. If it should happen to involve his liver particularly, we say he has a "postoperative jaundice," "chloroform liver," etc. If now we administer alkali and salt, the alkali neutralizes the abnormal acids present, and the increased salt concentration reduces the hydration-capacity of his swollen kidney-colloids and other body-colloids. If the injury to them has not been too great (or technically, if the colloidal changes have not become "irreversible"), these measures quickly restore his kidneys (and other involved organs) to a more normal state. As the body-colloids shrink, "free" water becomes available for urine. This shrinking in the kidney assures this organ a better blood-supply and the kidney-cells themselves are also once more enabled to resume their work. Once we have obtained this result, a recurrence need scarcely be feared, for the original toxin (the anesthetic) has by this time disappeared from the body and the relief obtained is permanent.

If we write the names of other toxic agents in the place of "anesthetic," we can imagine what happens in the nephritides that we encounter in any of the acute infections, and in the various other acute intoxications which we know to be associated with the development of nephritis. Here again natural physiologic processes take care of the great majority of cases, but when they do not we may again be able to give relief.

For self-evident reasons our prognosis grows worse and our efforts need to be greater when the intoxication is prolonged or is of a less removable type. We encounter this situation in protracted infections, in acute infections that leave behind toxins that stick with particular firmness to the kidney-cells (scarlet fever?) and in the prolonged intoxications resulting from phosphorus and the heavy metals. Not alone do some of these produce irreversible colloidal changes (necrosis) in the cells of the kidney from the start—changes, therefore, which can never be "cured" by any therapeutic procedure—but, even when such is not the case, in these prolonged intoxications the interference with the normal oxidation chemistry of the kidney-cells is of a more lasting character. Here our therapy also must be more persistent. Therefore in the nephritides following the administration of mercury or arsenic, in those accompanying acute and chronic infections, and in those of pregnant women, a single dose of alkali and salt may do no more than give temporary relief. We must meet the intoxication as long as it persists, and only as the nature of the intoxication permits of this, or our skill is equal to the occasion, can we hope for good results.

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[8] Bock and Hoffmann: Arch. f. (Anat. u.) Physiol., 1871. Fischer, M. H.: Univ. of California Publications in Physiology, 1903, i, 77; *ibid.*, 1904, i, 87; Arch. f. d. ges. Physiol. (Pflüger's), 1904, cvi, 80; *ibid.*, 1905, cix, 1.

We move from the protracted case of nephritis which is the result of a lasting intoxication of some kind by imperceptible steps over into the chronic nephritides. As soon as we discuss the chronic nephritides we find that we have to distinguish between those which represent a mere continuation of what was once a more acute process (the chronic parenchymatous nephritides, the secondarily contracted kidneys) and those which are chronic from the start, as in the type generally known as chronic interstitial nephritis (primarily contracted kidney) associated with changes in the cardiovascular system. Evidently if my views are correct, the nephritis which continues because of a protracted intoxication needs equally protracted treatment with alkali, salt and water. It has seemed to me that such a procedure yields good, and at times unexpectedly good results; but of this each must convince himself, for it is impossible, except as one works these things out for himself, adequately to meet the eternal argument that what has happened in such cases would have happened anyway.

Especially is it difficult to meet such an argument when we deal with the chronic interstitial types of nephritis associated with cardiovascular disease. One can foresee from the start that this type of nephritis offers the least possible chance of being markedly benefited by an alkali-salt-water therapy, and in its final stage none at all. I have emphasized this repeatedly, and were it not for the fact that it is on this very type of case that some of my critics have based their arguments, it would scarcely be necessary to refer again to some self-evident facts. How much and what can we do for such cases?

The primary change in chronic interstitial nephritis associated with vascular disease is not nephritis but vascular disease. Every experimental fact and all physiologic reasoning bear this out.[9] In consequence of the vascular disease, one piece after another of the kidney suffers destruction. These pieces as they degenerate show the morphologic evidences of "parenchymatous nephritis," and corresponding with these destructive lesions we find traces of albumin and a few casts in the urine. This process may go on for years without being noticed by the patient, for the healthy kidney-tissue between the areas of nephritis is able to carry on the necessary functions of excretion. Such a patient can get along easily with one-fourth of his total kidney-substance, and is more likely first to be made aware of his condition in a life-insurance office than in that of a physician whom he has himself sought; and if we make the diagnosis, his blood-pressure and the evident changes in his heart and blood-vessels are what lead to a correct estimate of the significance of his albumin and casts.

If we but remember that the blood-vessel disease is the primary thing, then we get also a correct estimate of the significance of the changes in distant organs—changes considered by most as consequences of chronic interstitial nephritis. An "albuminuric retinitis," a glaucoma, persistent headaches, even the uremic convulsions and coma occurring in these cases, are the same thing in the retina, the eye or the brain which in the kidney we call chronic nephritis. The hemorrhage into and swelling of the retina, the swelling of the eye with its clouding of the clear media, and the edema of the brain are analogous to the hemorrhage, the clouding and the swelling of smaller or larger areas of the kidney affected with chronic interstitial nephritis. That which is common to both is disease of the blood-vessels; and as this blood-vessel disease cannot be and is not materially influenced by the injection of alkali, salt and water, this therapeutic procedure can be of little or no use in this type of disease. The only cases in which it can be of service are those in which the blood-vessel disease is in itself not wholly responsible for the observed changes, but other temporarily active factors have been or are also responsible in bringing about the clinical picture.

An illustration of this is offered by the "exacerbations" which we note clinically in the cardiovascular types of chronic interstitial nephritis. Cardiac dilatation, an anesthetic, an alcoholic debauch, hard muscular work or starvation will do to the cardiovascular kidney what they do to a normal kidney, in which case these effects are added to those already produced in this organ by the irremovable blood-vessel disease. The cardiovascular (focal) parenchymatous nephritis becomes a diffuse nephritis, and clinically, a normal water output with few casts and little albumin gives way to a lowered output with many casts and much albumin. Alkali and salt relieve the consequences of such added factors, but blood-vessel changes that permanently interfere with the blood-supply (especially end-arteries) to a portion or all of an organ, are not relieved thus.

If the simple argument that I have outlined will be borne in mind, it will help to a better understanding of what may be expected and what cannot be expected from the use of alkali, salt and water in the chronic types of nephritis. The final picture of such cases is all too often not that of pure nephritis, but one complicated by a failing heart. When a heart from any cause whatsoever drops below the lowest level of efficiency necessary to maintain a proper circulation, and has no remnants of recuperative powers left in it, alkali and salt cannot supply them.[10]

A detailed account of the clinical histories of a number of nephritics treated by the method herein described is given not only in my book but elsewhere.[11] These have been commented on in various ways—to some they "read like the cures of the nostrum venders,"[12] to others the patients would have recovered anyway; some believe the whole procedure valueless, some believe it distinctly harmful; one group accepts what I have written as essentially true. In the dilemma I can only advise the objective thinker in medicine to reject my views and in treating his patient first exhaust other approved methods. If by any chance he should feel that his patient is going to die, then he may turn to an alkaline hypertonic salt solution. If the patient dies, the expected will merely have happened. If the patient lives, it proves nothing, but it may encourage repetition of the experiment. And this, I feel, is all that is necessary.

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[9] For a discussion, see Fischer, M. H.: Edema, New York, 1910, p. 192. Nephritis, New York, 1912, pp. 56 and 94.

[10] This is the type of case chosen by Joseph L. Miller (Am. Jour. Med. Sc., 1912, clxiv, 8; Clinical Experience in the Drug Treatment of Edema, abstr., THE JOURNAL A. M. A., June 22, 1912, p. 1972), on which to test out the value of a salt-alkali therapy. Aside from the fact that his "'Fisher' solution" had a composition all his own, his results were entirely predictable. According to his own statement the majority of his patients were nephritics with permanently decompensated hearts. Naturally alkali and salt could not produce a diuresis when the mechanism for water secretion was about gone. Only heart and respiratory stimulants, such as caffein and its derivatives, drugs in other words which gave these hearts a last kick and temporarily assured a better oxygen supply to the kidney- and body-tissues generally, gave a temporary "diuresis." It was not necessary to be a believer in any of the colloidal notions of water absorption to foresee all this, for we have known since 1860 that an inadequate circulation will not allow even a normal kidney to secrete urine.

[11] Fischer, M. H.: Nephritis, New York, 1912, p. 160; Tr. Assn. Am. Phys., 1912.

[12] Review of Fischer's "Nephritis," Arch. Int. Med., May, 1912, p. 637.

ACUTE POSTERIOR GANGLIONITIS

SIMULATING SURGICAL CONDITIONS IN THE ABDOMEN

LAWRENCE LITCHFIELD, M.D.
PITTSBURGH

Herpes zoster is the eruption, the peripheral manifestation, of acute posterior ganglionitis. During the symposium on acute anterior poliomyelitis, at the recent International Congress on Hygiene and Demography in Washington, frequent reference was made to the analogy between the disease under discussion and herpes zoster, in their prodromal symptoms, their self-limited course, occasional epidemic character, evidence of contagiousness in some cases, and the usual immunity to second attacks. Russo,[1] Fuchs, Hutchinson, Hybord and others, furthermore, have described cases of herpes zoster accompanied by paralyses. Whether or not the epidemic, sporadic, traumatic and secondary forms of herpes zoster are etiologically identical has not yet been determined, nor does it at present concern us.

The following description of the symptomatology of acute posterior ganglionitis, gathered from my own observations and from various articles and reported cases, is calculated to show at a glance ample justification for the title of this article.

An attack of acute posterior ganglionitis may be preceded by a prodromal period extending over several days, marked by restlessness, general malaise, anorexia, digestive disturbance and colicky pains; or an attack of sharply localized pain may have occurred in the same locality a week or more before the pain which is followed by the characteristic eruption. The real onset of the disease may be signalized by the occurrence of a sudden, severe, more or less sharply localized pain, which may arouse the patient out of a sound sleep at night and has been described as sharp, shooting or lancinating. This may be accompanied or preceded by chilliness, shivering or slight rigors, general muscular pains, and a slight rise of temperature—100.5 in an adult or 102 in a child—nausea or vomiting, local tenderness, and moderate leukocytosis (13,000 to 18,000, chiefly polymorphonuclear, although the eosinophils may share in the increase). The only records of leukocyte counts in this disease which I have been able to find have been made after the appearance of the eruption, but it is fair to assume that leukocytosis often exists in the preeruptive stage. Acute cases may be accompanied by retention of urine and feces. In one case reported by Sabrazés and Mathis,[2] the pain appeared suddenly in the right hypochondrium after an unusual effort. This severe and sharply localized pain and tenderness may precede, by as much as five days, the appearance of the characteristic eruption over the same area. Now let the corresponding ganglia be affected and we may have the pain and tenderness occurring over the appendix, the gall-bladder, pancreas or ureter, radiating to the scrotum or labia majora.

Savill[3] says the neuralgia which accompanies or follows herpes is one of the rarer causes of severe abdominal pains without collapse.

Cabot[4] credits herpes zoster with causing lumbar pains as frequently as all of the renal affections combined.

My attention was first attracted to this interesting question by the following case:

CASE 1.—Mrs. J. K., widow, aged 45. First seen Dec. 24, 1907. Very severe pain over the course of the left ureter for several days, with severe exacerbations at night, bad enough to keep her awake—not exactly colicky, but waves of pain. Pain not influenced by taking food, bowel movements or urination. Vaginal and rectal examinations negative. Tenderness elicited, on deep pressure, over the region of the left ureter and nowhere else.

Radiograms were at once taken, and owing to the apparent urgency of the case, Dr. Boggs very kindly went to his laboratory on Christmas morning to develop the plates, which were negative. On the afternoon of the 25th a characteristic rash of herpes zoster appeared over the site of the previous pain and tenderness. A leukocyte count had been ordered but not yet made.

In October, 1912, I saw, through the kindness of Dr. George H. Vaux, the following case:

CASE 2.—Mrs. A. P., aged 70. First seen by me Oct. 2, 1912. My opinion was sought as to the advisability of immediate operation. She was taken sick September 25, with severe pain across upper part of abdomen, which kept her awake most of night. Pain was not so severe during following day, but very severe again at night, with considerable chilling ("teeth did not chatter"); temperature 101.

September 26 and 27, abdominal distention and September 28 still considerable abdominal pain; didn't complain particularly of nausea, but vomited egg and toast.

September 29, somnolent condition. Clear when aroused, but immediately went to sleep again. Turpentine stupes, applied for abdominal distention, left redness in the right hypochondriac region. Bowels kept open with calomel, etc., from the start.

October 1, slight signs of old infection at right pulmonary apex; gallstones diagnosed and immediate operation recommended by a consulting surgeon.

October 2, abdomen much distended, no vomiting, no severe pain since Sept. 28. Systolic pressure 95, pulse 80. Well-marked area of herpes zoster in the right hypochondriac and right subscapular regions. The rash which first appeared along the right hypochondrium was attributed to strong mustard plasters or turpentine stupes which had been used for pain and meteorism, and it was only when a characteristic herpetic eruption was discovered in the same segment posteriorly that the true nature of the case was recognized. Close inspection of the anterior patches of herpes then disclosed the cauliflower-like aggregation of tiny vesicles, which, if noticed earlier, would have excluded the idea of a burn.

Marinacci[5] reports a case of herpes zoster in which intense pain across the lower abdomen, with marked tenderness in the hypogastrium and in both iliac fossae, fever, small frequent pulse, persistent vomiting and hiccough, with the face drawn and changed by suffering, strongly suggested a peritonitis, but bladder and intestines continued to function normally. Had they been inhibited, as they might have been by the ganglionitis, the picture of peritonitis would have been strikingly complete. There was no muscular rigidity, and of course no peritoneal effusion.

I have heard indirectly of several cases of herpes zoster in which the first diagnosis was appendicitis.

For months after an attack of acute posterior ganglionitis there may be localized hyperesthesia or hyperalgesia, or visceral neuralgias. Hence, in considering the possible causes of abdominal pain, scars and a history of recent herpes should be carefully sought.

Head[6] mentions the fact that cases of herpes zoster in the preeruptive stage have been admitted to the London hospitals as pleurisy or pneumonia.

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[1] Russo, V.: Gazz. d. osp. e d. clin., July 20, 1911, No. 87.

[2] Sabrazés and Mathis: Rev. de méd., 1901, p. 251.

[3] Savill, T. D.: System of Clinical Medicine, Ed. 2, London, Edward Arnold, 1909, p. 257.

[4] Cabot, R.: Differential Diagnosis, Philadelphia, Saunders Co., Ed. 1, table op., p. 78.

[5] Marinacci, S.: Riv. osp., Rome, 1912, ii, 393.

[6] Head, Henry: System of Medicine, Albutt and Rolleston, ed. 1910, vii, 470.

I can find no record of leukocyte counts in this preeruptive stage. Nor does a study of medical literature[7] since 1885 (as represented in the "Index-Catalogue of the Library of the Surgeon-General" and the *Index Medicus*) reveal any other reference to this possible source of diagnostic error. On the other hand, several articles have appeared during the past few years showing a probable etiologic relation between visceral lesions—trauma, nephritis, hydronephrosis, etc.—and certain cases of herpes zoster, therefore the appearance of an herpetic eruption does not by any means exclude renal colic or other visceral conditions, which may even stand in causal relation to the ganglionitis. Under these circumstances the segmental zone in which the herpes appears may give information as to the organ involved.

Rosenbaum[8] reports that a patient of his with renal colic, followed by herpes zoster, described the pain of the former as deep interior and colic-like as contrasted with a superficial pain and burning of the zoster. The character of the pain, however, cannot be depended on in making the diagnosis.

Head states that when the tenth dorsal segment is affected with simple herpes zoster the testicle does not become tender as it does when the tenth dorsal segmental area becomes hyperalgesic as a result of renal calculus.

We should be particularly on our guard against misaking an acute posterior ganglionitis, in the preeruptive stage, for a condition demanding surgical interention in all patients with diseases which are especially iable to be complicated by herpes zoster, such as tabes, eneral paralysis, tuberculosis, psoriasis, and possibly all atients who are taking arsenic.

5431 Fifth Avenue.

A COMPARISON BETWEEN ZOSTER OF THE FACE AND THAT OF THE LEG

AS SHOWN IN TWO CASES RECENTLY OBSERVED

DOUGLASS W. MONTGOMERY, M.D.

AND

GEORGE D. CULVER, M.D.

SAN FRANCISCO

The anatomic basis of zoster is an inflammation of the ganglion on the sensory root of a cranial or spinal nerve. This ganglionitis gives rise to trophic disturbances in the emerging or efferent nerve that cause the characteristic, grouped vesicular eruption. As for the cause of the ganglionitis, in the vast majority of instances it undoubtedly is a micro-organism, but this point need not be dwelt on here, except so far as it helps in the elucidation of the present comparison.

The symptoms common to zoster in any situation are:

1. The almost constant occurrence of neuralgia of the nerve, the cutaneous distribution of which is about to be the seat of the eruption. This neuralgia may precede the eruption, sometimes by a considerable time, or it may be coincident with the cutaneous outbreak. Sometimes this symptom is entirely absent.

2. A characteristic vesicular eruption, often grouped, and often plainly showing, by its distribution, its dependence on the cutaneous branches of a sensory nerve. Even the individual lesions carry the mark of their trophoneurotic origin, as the contents of the fresh ones are sterile, and their shape is conical with the point of the cone directed inward.[1]

3. The eruption is almost always unilateral, and these symptoms of unilaterality, the grouping and the linear distribution of the lesions, and the brilliant jewel-like appearance of the vesicles, are sufficient to make a positive diagnosis.

4. The eruption is self-limited, and one attack usually grants immunity against the occurrence of future attacks.

The eruption of zoster, no matter where it occurs, is so characteristic as almost always to permit of an instantaneous diagnosis; nevertheless the differences in the comportment of a zoster eruption that occurs on the fifth nerve, especially its two upper branches, and that which occurs on any of the spinal nerves, are so constant and marked as to clearly show each difference is due to some equally constant cause. These differences are the points that we especially wish to emphasize in this paper, and to make them more emphatic we report the following recently observed cases:

Case 1.—A man about 50 years of age consulted us Oct. 17, 1911, in regard to a vesiculopapular eruption on a reddened base that had appeared the day before on the outer surface of the lower third of the left leg. As possibly contributory to the appearance of the eruption he related the following: October 5, he slipped on the sidewalk, falling backward, but not completely, as he caught himself on his hands. October 8, after a long walk, he felt an uneasiness in the leg. During the day of October 12 the leg felt a little sore in an indefinite way and that night he suffered severe pain. The pain persisted and October 16 the eruption broke out. There was one large group of vesicles and two smaller ones, which were only fairly characteristic. The vesicles, however, did not look like those of neurotic eczema, as they were larger. The papules were also larger than we would expect in this disease, and there was no itchiness. The fact that there were two distinct groups and that the attack was preceded and accompanied by severe pain excluded herpes simplex. The pain appeared to start in the ankle bend and radiated upward on the outer surfaces of the leg and thigh to the hip. Three days later these groups were characteristically and beautifully vesicular, and on the sole there had developed two other typical groups, one of them in the instep, consisting of four vesicles, and the other, also of four vesicles, behind the ball of the great toe. All these groups were strung along the distribution of the peroneus. They were undoubtedly the eruption of herpes zoster. The eruption pursued the usual course, and in two weeks the skin had assumed its normal appearance. The pain endured longer, and for some time the left lower extremity was very sensitive to cold.

Zoster below the knee is very rare, and zoster of the foot or sole is exceedingly rare indeed, but its rarity is not the chief point that we wished to dwell on in this paper. We wish to draw attention to the long-continued neuralgia that preceded the eruption and to the mildness of the eruption. We believe the neuralgia to represent the disturbance to the nerve axis as the virus crept up the fine, accompanying, lymphatic vessels, and that the antitoxin, generated during this long journey, *modified* the ganglionitis that ensued when the virus *attained* the ganglion, and that the mild zoster eruption was an indication of the mildness of this ganglionitis. In fact, we believe that many of these cases of centripetal zoster infections never give rise to the zoster eruptions at all, but only to neuralgia. The fact that these infections are never diagnosed as zoster unless the eruption occurs we believe to be one of the reasons why herpes zoster is so rare on the lower extremities. The infections are either cut short by their self-limitation before they arrive at the ganglion or, even if they do arrive, the ganglionitis is too slight to give rise to the characteristic trophoneurotic eruption.

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[7] Among this literature the following references are cited as of interest: Bittorf, A.: Herpes Zoster and Kidney Colic, Deutsch. med. Wchnschr., Feb. 16, 1911; abstr. The Journal A. M. A., March 25, 1911, p. 933. Kanera: Deutsch. med. Wchnschr., 1911, No. 37, p. 638. Knowles, F. C.: Pennsylvania Med. Jour., May, 1912, p. 615. Krotoszyner, M.: The Journal A. M. A., Sept. 9, 1911, p. 900. Rosenberg, E.: Kidney Colic and Herpes Zoster, Deutsch. med. Wchnschr., April 27, 1911; abstr. The Journal A. M. A., June 30, 1911, p. 1694. Stein, J.: Prag. med. Wchnschr., 1911, xxxvi, 330. Taylor, F.: Guy's Hospital Reports, London, 1896, lii, 37.

[8] Rosenbaum: Deutsch. med. Wchnschr., June 15, 1911, No. 24.

[1] Hoffmann, Erich, and Frieboes, W.: Histopathologie des Herpes Zoster, Arch. f. Derm. u. Syph., May, 1912, cxiii, 443.

The preceding ran a classic, uncomplicated course as a zoster of a spinal nerve, and differed from the ordinary case in no way except in its position. The following case also ran a classic course for zoster of the first branch of the trigeminus. The only unusual features about it were paralysis of a motor nerve and a subsequent glaucoma. Even the paralysis, as we shall see later, is a well known association, and the consideration of the glaucoma in its relationship with zoster must be deferred to another paper.

CASE 2.—H. H., aged 51, noticed an eruption on the forehead on May 26, 1912, which on June 1, when he sought relief, consisted of red blotches occupying the area supplied by the supra-orbital branch of the left ophthalmic nerve. It was sharply limited at the median line of the forehead, and extended back to the vertex and down into the left temporal region. The left preauricular, submaxillary and some of the cervical lymph-nodes were swollen. The left eye was watery and a little sensitive to light. Pain had not preceded the eruption, but it was now present, and was increasing in severity. At this time, however, neither the character of the pain nor the appearance of the eruption portended a severe zoster. Two days later the eruption had extended down the left side of the nose, and thereafter was characteristically erythematopapular and vesicular throughout. Severe sticking pain and intense discomfort developed, and the whole picture indicated an intense neuritis and ganglionitis. For relief opiates were required. The vesicles were seated on a deep inflammatory base, and on breaking developed into steep-edged ulcers that healed by scarring. These deep, steep-edged, flat-bottomed scars were most thickly strewn on the forehead, but were not entirely confined to this situation, as there was later found conjunctival scarring, and scars also supervened on the left side of the nose.

June 22 the patient was unable to lift the left upper eyelid, and when the lids were forced open the swollen, injected conjunctiva bulged out into the palpebral slit. This caused excruciating pain. Two weeks later it was possible to raise the eyelid slightly, evidently by the action of the occipitofrontalis muscle. Two months after the onset the patient was referred to Dr. K. Pischel. His examination showed the presence of fine maculae corneae as the result of small erosions, which alone sufficiently explained the continued soreness of the lids and the sensitiveness to light. The left pupil reacted slightly to light, but the photophobia still prevented sight tests being made. Pain was still present, but the general condition of the patient was greatly improved. He was still unable to raise the eyelid except with the aid of the occipitofrontalis muscle. August 8 the patient was able to lift the eyelid quite perceptibly showing a definite return of function of the levator palpebrae superioris. He still complained of neuralgic pains, and a feeling of pressure at a point over the parietal bone on the left side. There was another sensitive point to the left of the nose tip, and one about the middle of the external surface of the nose, and one on a line between the nose and cheek. He also complained of some sensitiveness within the left nostril.

This patient's troubles were not, however, by any means finished. Dec. 24, 1912, he developed glaucoma and a superficial corneal ulcer of the left eye with accompanying hypopyon that yielded, under Dr. Pischel's management, to paracentesis.

In this instance of zoster there was involvement of both a sensory and a motor nerve. The sensory nerve involved supplies the conjunctiva and one of the branches of the motor nerve involved supplies the levator palpebrae. A neurotropic virus entering the conjunctiva would easily attain the ophthalmic branch of the fifth nerve, and it would also be in close proximity to the terminal branches of the levator palpebrae superioris that here reaches far over into the lid. By running back along the sensory nerves the virus would give rise to the trophic symptoms we call zoster, and by running back along the motor nerve and influencing its motor center the paralysis is also rationally explained.

The idea that the virus may run along the nerves in zoster is not new, but the investigators whom we know to have taken this view have thought of the virus as first attaining the ganglion through the blood and then running out from the ganglion along the nerve. Hoffmann and Frieboes[1] have mentioned this as a possibility, and Hewlett, in order to explain the occasional coincident paralysis, thought that possibly the virus ran centrifugally from the ganglion along the sensory nerve and then through neighboring or communicating branches back up along the motor nerves to the motor center involved.[2]

The question of the proximity of the nerve terminals to the surface is a most interesting one in zoster. The sensory nerve terminals from their very nature lie near the surface, and therefore we have more zoster infections of these than of the motor nerves, that lie deeper. Some motor nerve terminals, however, such as those supplying the muscles moving the eyeball and the muscles of the face lie almost as near the surface as the sensory nerve terminals, and these muscles, supplied by these superficially situated motor nerves, are the very ones most subject to paralysis in zoster. In Hunt's statistics of 158 cases of paralysis accompanying zoster, twenty-four were of the ocular muscles and eighty were of muscles supplied by the facial nerve.[3] That is to say, 64.82 per cent. of all the paralyses, as collected by Hunt, were of these two sets of superficially situated motor nerves.

The severity of the trophic disturbances accompanying zoster of the ophthalmic branch of the fifth nerve is well known; so well known, in fact, that a unilateral grouped scarring of the forehead leads an experienced clinician to infer immediately that it is from zoster. Scarring is less frequent in the region supplied by the superior maxillary branch, and we have never seen it of the inferior maxillary branch. That destructive panophthalmitis is not also a frequent consequence in zoster of the ophthalmic branch of the fifth nerve is probably due to the fact that the ciliary ganglion, not the gasserian ganglion, is the trophic center for the interior of the eye. The probable reason for the severity of the inflammation of the gasserian ganglion and the corresponding severity of the trophic disturbances lies in the short distance the virus has to travel in order to reach it. In this short distance not enough antitoxin is produced to mitigate the severity of the ganglionitis, and in this respect there is a marked contrast between zoster of the leg and foot, in which the virus has to make such a long journey before reaching the ganglion, and zoster of the ophthalmic branch of the trigeminus, in which the distance to the ganglion is so much shorter.

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[2] Hewlett, Albion Walter: Motor Complications of Herpes Zoster, California State Jour. Med., April, 1906.

[3] Hunt, J. Ramsay: The Paralytic Complications of Herpes Zoster of the Cephalic Extremity, THE JOURNAL A. M. A., Oct. 30, 1910, p. 1456.

In comparing herpes zoster of the lower extremity with that of the trigeminus we find that the latter is much more frequent, its trophic manifestations are much more severe and, as we have seen, it is much more liable to be accompanied by paralysis of the muscles of the affected region. These differences are best explained by considering herpes zoster a centripetal disease. In the two cases here reported as direct contrasts, there was in the one involving the lower extremity a long-continued pre-eruptive neuralgia which we also regard as further evidence of the truth of our hypothesis.

Besides these contrasts in the comportment of zoster of these two regions one of the most striking peculiarities of the disease, wherever it occurs, is its unilaterality, and comprehension of the mechanism of this characteristic is also facilitated by the same theory. Admitting, for example, that the virus may infect both conjunctivae simultaneously, yet in one it is almost sure to find a readier entrance into the nerve terminals than in the other, and the more fortunate infection will succeed in attaining the ganglion first, and therefore will cause the characteristic eruption before the other has time to develop.

That the virus travels from the periphery toward the center seems to us to furnish the only reasonable explanation of the clinical facts enumerated above. The question of the primary lesion, the door of entrance of the virus, then arises. There are on the skin, and mucous membranes of the eye, nose, and mouth many opportunities for a virus to enter. The primary lesion may be insignificant and, from the very nature of the disease, may be long healed over by the time the trophic symptoms occur that we are used to considering as the entire phenomena of the disease. This disappearance of the primary lesion before the main phenomena of the disease appear is not limited to zoster.

323 Geary Street.

TREATMENT OF SUPERFICIAL NEW GROWTHS BY PURE RADIUM BROMID

FRANCIS H. WILLIAMS, M.D.*
BOSTON

AND

SAMUEL W. ELLSWORTH, M.D.
QUINCY, MASS.

Until the cause of cancer is discovered and a better remedy for it is found, the discriminating practitioner will employ the best means at his disposal, according to the case to be treated, whether it be operation, caustics, x-rays, or some form of radio-activity. No one of these is adapted to all patients, nor always to all stages of the disease in the same patient. Surgery is necessary under some conditions and the roentgen-ray, or the much safer radium, is preferable under others. Our object now, however, is to draw the attention of the profession in this country to the beneficent results obtained from radium in private practice and at the radium clinic (which was started in 1903 at the Boston City Hospital) when this remedy is employed in suitable cases of skin cancer and in sufficient amount and strength. Experience is, of course, necessary. Without it there is danger of doing harm or failing to do good through lack of knowledge.

In the early days of its use the healing action of radium on superficial or other forms of cancer was doubted by many, and not unnaturally, as it seemed almost miraculous that it should have any power over a disease for which the chief remedy had been the knife, an admission in a way that there was no remedy. Later many accepted the fact that radium was temporarily efficient in some of the superficial cancers, but they questioned the permanency of the results obtained.

TABLE 1.—RESULTS, JAN. 1, 1911, IN 181 CASES OF SKIN CANCER IN WHICH THE TREATMENT WAS BEGUN BEFORE DEC. 31, 1909

Site	Total	Healed	Not Healed	Under Treatment	Discon. Treatment
Lip	23	19	1	0	3
Eyelid	19	13	0	1	5*
Nose	45	40	2†	1	2
Face	68	59	4	1	4‡
Ear	8	6	0	0	2
Neck	4	4	0	0	0
Hand	6	6	0	0	0
Inside lower lip	1	1	0	0	0
Auditory canal	1	1	0	0	0
Scalp	3	3	0	0	0
Nose and orbit	1	1	0	0	0
Nose, cheek and breast	1	1	0	0	0
Nose, lip and ear	1	0	0	0	1
	181	154	7	3	17§

* In one case treatment was continued so long without healing that operation was advised and done.

† One patient not healed by x-rays or radium. Attendance too irregular.

‡ One patient died of "acute indigestion" while under treatment.

§ Of the seventeen who discontinued treatment, nine were improving.

TABLE 2.—DURATION OF HEALING OF 154 CASES ON JAN. 1, 1911

Years	Number Healed	Number Recurred	Number Died	Total
Less than 1	21	..	..	...
1-2	47	..	..	...
2-3	19	..	..	...
3-4	18	..	..	...
4-5	3	..	..	...
5-6	20	.	..	...
6.7	4	..	..	...
7 or more	3	..	..	...
	135	16	3	154

Table 1 and illustrative cases show that if patients come early for treatment most of the superficial skin cancers will heal under radium. The permanency of the results is indicated in Table 2.

The cases of skin cancer here presented are consecutive, with the exception of five which have been omitted because they were beyond the reach of any remedy, and for which radium was used as a palliative only. The ages of the patients varied from 24 to 91 years.

Of the sixteen patients among whom there were recurrences, one died of another disease during treatment, two healed under further treatment, six were under treatment, three discontinued treatment, three were advised to have operation, and one delayed coming for further treatment until it was too late for radium to be of service. The three deaths occurred prior to January 1, 1911, from some other disease. In three of the 154 cases it was necessary to resort to an operation following the radium treatment; on the other hand, there were fifteen cases in which operation failed and after which radium was successfully employed, and several of these had had more than one operation.

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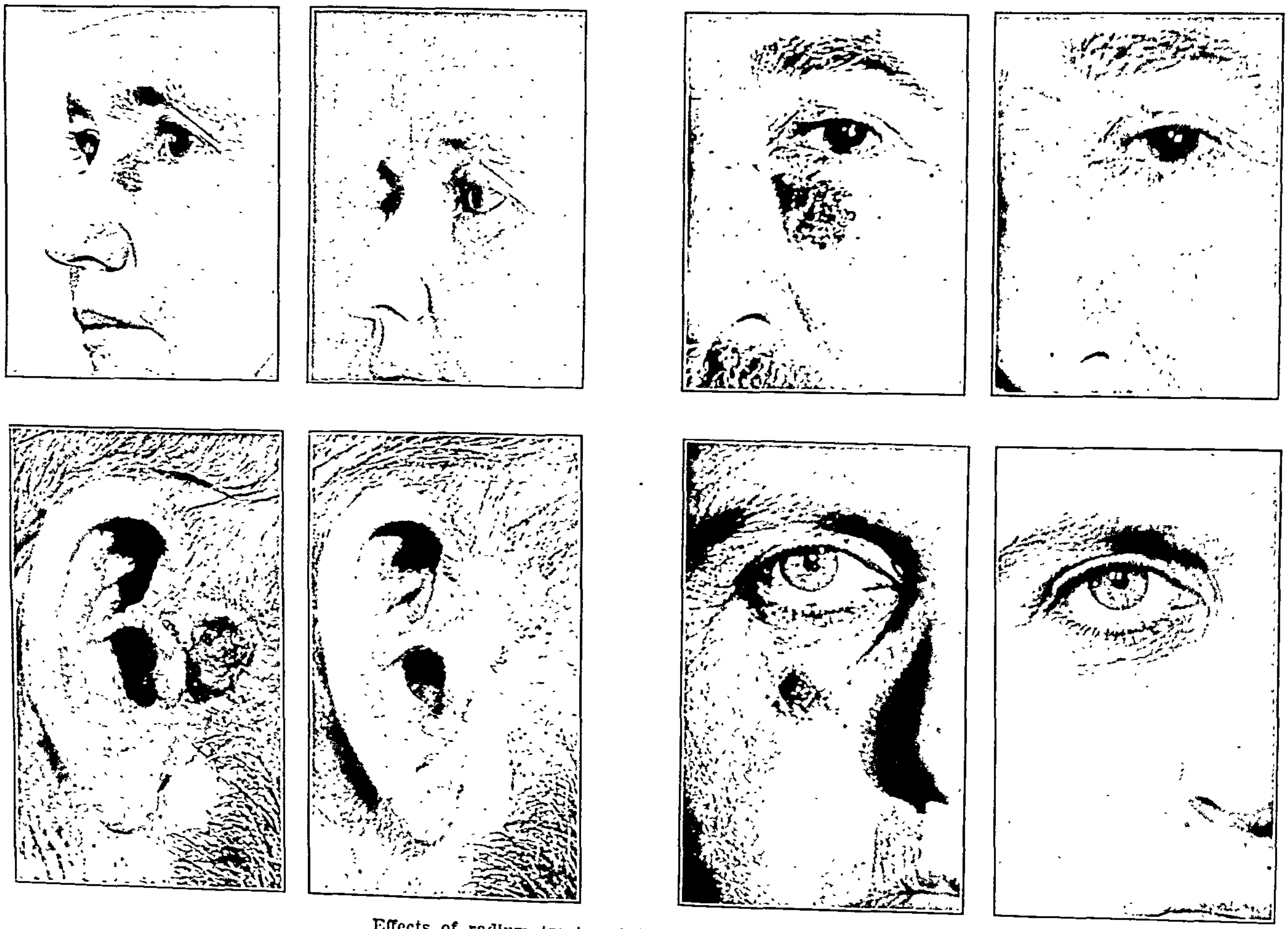
* Papers have been presented on this subject from time to time, and articles published, as follows: Williams, F. H.: Some of the Physical Properties and Medical Uses of Radium Salts; with Report of Forty-Two Cases, Treated by Pure Radium Bromid (read at the meeting of the Boston Society of Medical Sciences, Dec. 15, 1903), Med. News, New York, Feb. 6, 1904; A Comparison Between the Medical Uses of the X-Rays and the Rays from the Salts of Radium (read at the annual meeting of the Boston Society for Medical Improvement, Jan. 18, 1904), Boston Med. and Surg. Jour., Feb. 25, 1904; Use of Radium in Some Diseases of the Eye, Boston Med. and Surg. Jour., May 26, 1904; Early Treatment of Some Superficial Cancers, Especially Epitheliomas, by Pure Radium Bromid rather than Operation or X-Rays (presented, with a demonstration of more than twenty patients, at the Surgical Section of the Massachusetts Medical Society, June 9, 1908), Medical Communications of the Massachusetts Med. Soc., 1908, xxi, 261, and THE JOURNAL A. M. A., Sept. 12, 1908, p. 894.

The cases given in the tables do not show the best results that could be obtained by radium if only those most adapted to its use had been chosen. January 1, 1913, an attempt was made to get reports from these patients, but they were so scattered that it was not possible to get a sufficient number to make it advisable to change this table. So far as obtained, the reports were very favorable.

It would make this paper too long to give the record of all these patients, therefore it has seemed better to give illustrative cases, which naturally fall into groups. Some of these cases are not included in the tables, as they came for treatment after Jan. 1, 1911.



Effects of radium treatment in some small skin cancers.

GROUP I.—Small epitheliomas which had not been operated on or treated by caustics or x-rays, in which the glands were not implicated, and for which radium was the only treatment.

GROUP II.—New growths about the eye, the site of which made operation difficult, as it might be a serious matter to remove any considerable portion of the lid.

GROUP III.—Cases for which other treatment, such as operation, x-rays, caustics, iodin, etc., had been resorted to first, and therefore treatment by radium usually extended over a longer period than in Group I, in some cases success being reached only after very persistent treatment.

GROUP IV.—Cases in which epithelioma was too deep to be classed as superficial and too extensive to give radium its best opportunity, but for which other treatment had failed or the site made operation undesirable.

GROUP V.—Cases in which no treatment could bring about healing and for which radium was used simply to retard the growth or to keep the patient from the blank and impassable wall of hopelessness to shorten the period of despair.

GROUP I

CASE 1.—Mr. F., aged 49. Characteristic epithelioma on mucous membrane of lower lip, 1 cm. by 1.5 cm., a raised ulcerated surface with induration 1 cm. deep. Healed in four weeks with ten applications of radium. The induration began to diminish three days after the first application. The ulceration promptly became less indolent, and after five applications a narrow, slightly contracted circle of healed scar tissue began to appear around the edge, and the induration had disappeared. Still healed Jan. 1, 1913, five years later.

CASE 2.—Mr. M., aged 56. Epithelioma on mucous membrane of lower lip, 1 cm. by 3.5 cm. Healed in one month with seven applications of radium. Still healed, Jan. 1, 1913, five years later.

CASE 3.—Mr. G., aged 65. Epithelioma of nose, 1 cm. in diameter, of from two or three years' duration. Healed after five applications. Still healed, Jan. 1, 1913, five years later.

CASE 4.—Mr. L., aged 68. Epithelioma on mucous membrane of left side of lip, of from three to four years' duration. Healed after three applications. Died as the result of an accident at sea.

CASE 5.—Miss W., aged 70. Epithelioma of forehead. Ulceration about 4 cm. in diameter, in part covered by a crust. Healed in three months with fourteen applications. Remained healed up to the time of her death, one and one-half years later.

GROUP II

CASE 6.—Mr. D., aged 50. Epithelioma, 1 cm. in diameter, above inner canthus of left eye. Improvement was continuous from the beginning of radium treatment. No pain or irritation. Healed in seven weeks with eleven applications. Still healed, Jan. 1, 1913, five years later.

Case 7.—Mr. McL. Epithelioma of lower lid of right eye, 1 cm. long, raised. Operation in 1909; recurrence in six weeks. Healed after fifteen applications of radium. Still healed, Jan. 1, 1913, three years later. (Not included in the table.)

Case 8.—Miss B., aged about 50. New growth on the upper lid, which measured 1 cm. horizontally and 1.5 cm. vertically. This was indurated and raised above the surface about 2 mm. The growth had begun six years previously, then grew more rapidly, and was operated on. Just two months after the operation it returned and was larger than it had been at any time. This has improved promptly under radium, and disappeared after thirteen applications. (Not included in the table.)

GROUP III

Case 9.—Mr. T. Growth on the cheek which was operated on, but recurred in six months and grew rapidly. It was then treated with caustics twice and healed in the center, leaving blisters outside, but recurred again in four or five weeks, and began to discharge and again grew rapidly until it was 2 cm. in diameter. Further operation was advised and the patient was told that it must be extensive and would cause paralysis on that side of the face. He declined operation, was treated by radium and the growth disappeared. This patient also had two new growths on the other side of the face, one about 6 mm. and the other about 12 mm. in diameter, which had not been treated in any way, and these yielded to radium in twelve applications. (Not included in the table.)

Case 10.—Mr. F., aged 45. Indurated area 1.5 cm. wide and 1.5 cm. long, beginning at the outer canthus of the eye and extending on to the temple and cheek. Central portion covered with a crust. Eleven years previously he broke the skin near the outer portion of the left eye, had erysipelas, and there was an area which did not heal well. Operation was done and since then he has had various kinds of treatment—x-rays, electric needle, etc.—for one and one-half years, but no treatment for the past six months. This promptly began to heal under radium and has now only a very small spot of induration left. (Not included in the table.)

GROUP IV

Case 11.—Mr. R., aged 86. Growth on the back of the hand near the wrist, which had been operated on twice and recurred twice. When first seen it was a raised, granulating surface, about 4 cm. in diameter, with an indurated base of larger area. The case did not seem to be a very encouraging one for radium treatment, and had not operation failed twice, this remedy would not then have been considered for a moment, but under the circumstances there seemed nothing else to be done. It proved most satisfactory; the induration disappeared, healing took place, and remained permanent up to the death of the patient from old age, a year and a half later.

Case 12.—Miss G., aged 83. Epithelioma of face, which she thinks began forty years ago. It had grown rapidly of late, involved the left cheek, and so much of the upper lip on that side that only a narrow strip remained and it seemed as if in a few days this might ulcerate across and leave the ends hanging. The diseased area, exposing a considerable portion of bones in the central deeper portion was a disagreeable ulcerating surface, so large that it seemed hopeless to attempt to treat it by radium, but the patient was unwilling to have operation, which would necessarily have been very extensive if it had, under the circumstances, been advisable. Under radium the ulceration has nearly healed and the edges of the large opening have puckered together, as if drawn by a purse-string, so that the upper lip is now perfectly presentable, and the opening above, between the cheek and the nose, so small and the former hideous appearance so improved that the patient would not be disturbing to others. This case is not included in the table, but is mentioned as being a good example of this group. She is still under treatment. The epithelioma has not yet wholly healed, but the patient is no longer in a pitiable condition or shocking in appearance, and the outlook is now favorable.

The tables and illustrative cases demonstrate the efficiency of a proper quantity of pure radium bromid for superficial skin cancers, especially in the early stages, both as to healing and permanency of results, when it is the first and only treatment employed, and its usefulness even when handicapped by being employed after a recurrence following operation or operations, or after the use of caustics or the x-rays.

For the treatment of these cases 120 mg. of pure radium bromid have been at our disposal and more than 20 gm. of weaker preparations but, as a rule, 50 mg. of pure radium bromid in a capsule with a mica cover, placed in a lead container with a long handle have been employed. From the beginning screens or filters of aluminum of varying thickness have been used when it was desirable to absorb some of the less penetrating rays in order that they might not reach the patient. Not more than two applications should be made a week, and the duration may vary from one or two to ten minutes, according to the extent and depth of the disease, the radium being moved about so that all parts are reached. In some cases the time of application may be extended to half an hour or even more, if the area is of considerable size, but, of course, this does not apply to the early cases. It is very difficult to state how many applications will be necessary in a given case. Now and then two or three are sufficient, but more frequently ten to fifteen are required, and sometimes twenty or more; but when patients learn to come early the latter numbers can probably be reduced. A more vigorous use of radium, that is, the lengthening of each treatment, would also lessen the number required, but this might involve the risk of over-exposure. We have preferred to feel our way with the safer method. In short, no definite rules as to duration and number of applications can be laid down to cover all cases; experience and judgment are the best guides. As with other efficient remedies, success may follow the use of radium in the hands of one practitioner and failure in those of another.

Improvement usually takes place after two or three applications of radium, thus indicating that the treatment is likely to be successful. The initial improvement may consist simply in the arrest of the growth and in signs of drying up, or in a freer discharge. If there has been discomfort or pain, it is usually relieved by the radium, and sometimes within an hour or two. Also, in some cases there is striking improvement in the patient's general condition. If radium as an initial remedy, in sufficient quantity and suitably employed, does not bring about marked improvement within three or four weeks, it would, as a rule, be better to choose some other method, but this is seldom necessary if the case is at all a proper one for treatment by radium. If, however, this remedy is unsuccessful, the delay thus caused is not sufficient to be detrimental to the patient. When radium is used after recurrence following operation, or other treatment, a longer time is usually required to cause a disappearance of the new growth than when it is the primary remedy. Rapidly growing and discharging new growths respond to radium more quickly than those of an indolent type. If one of the latter kind is healing very slowly, a different treatment may be considered, but if the cosmetic effects are in question or an operation has been done and a recurrence taken place, persistence with radium may be wiser.

In cases which do not yield to radium it is well to bear in mind that the disease may be of syphilitic origin and to try specific treatment.

If a patient is otherwise diseased, or is of low vitality, radium is handicapped. Failure in the following case may have been due to the kidney trouble, or because the radium was not used with sufficient vigor.

CASE 13.—Mr. J., aged 58. Epithelioma of the lip of two years' duration (not included in the table). Patient suffering from a serious kidney trouble and warned that under these circumstances radium might not be successful. Treatment by this remedy at first brought about some improvement, but it came more slowly than is usual in ordinary cases and when, after continued treatment, the growth did not heal, operation was advised and done. It is too soon to say what the result of the operation will be.

Those who have been operated on for cancer, even of the breast, should be seen at stated intervals, and if there is any sign of recurrence, such as spots of induration in or near the scar, they should be treated by radium, as in some cases, at least, it has been found more efficient than any other treatment we have used in checking a recurrence of this character.

Judging by the number of persons with small new growths that we have successfully treated with radium after recurrences following an operation, this remedy has the advantage in many cases. Recurrences occur after any method of treatment, but we believe less frequently after radium than after operation. Should they occur after the use of radium, experience thus far shows that, as a rule, they yield to further treatment by this remedy.

Sometimes it is feared that treating a cancer in one place may cause its appearance elsewhere, but so far as we have observed, this has not happened in any of the patients suitable for radium treatment.

LYMPH-NODES, TONGUE, MOUTH, TONSILS

When the lymph-nodes are involved, no time should be lost by using radium from the outside. For this purpose and in this way it is unsuitable. We have not had much experience with new growths in the mouth, tongue or tonsils, but so far as it has gone radium has not healed them permanently. To be of service the treatment must be begun in a very early stage, and as patients are not aware of the seriousness of the disease, they delay seeking advice until the growth has become too extensive to be materially benefited by radium.

There is no danger from radium in the hands of those who understand its use and it has a great advantage over the x-rays in that the output of its radiations is uniform in amount and quality, whereas that from an x-ray tube may be very uneven as regards both of these. This possible variability of output is one reason that injury has resulted from the use of the x-rays.

Our experience of the last nine to ten years demonstrates that radium should be used in the treatment of early skin cancers, especially if the new growth is on the eyelid, as operation might leave the patient with a lid so small or so large that it would harass him through life. The cosmetic results are excellent and the application painless. For the latter reason the patient is not led to a perhaps serious or even fatal delay, as may be the case when a dreaded operation is in question. Radium will also cause some growths to heal that are extensive and even inoperable and, while these show its power and efficiency, every endeavor, of course, should be made to prevent the occurrence of larger growths by using radium early. In the treatment of early skin cancers radium finds a great opportunity. It is important that physicians and surgeons should realize the value of this remedy. Recently one of us reported to the physician who had sent a patient for radium treatment that the growth had disappeared after two applications. The physician was gratified, as he had had misgivings in recommending radium to his patient and difficulty in getting her to consent to it after a surgeon had strongly advocated operation.

Skin lesions should not be neglected; though they may lie dormant for a time, they may on the other hand, if left untreated, lead to serious trouble by being irritated or from some other cause. Many surgeons advocate operation for any skin lesion which might even be suspected of being or becoming malignant, but as many of these small lesions heal under radium, this painless remedy should be used first. If unsuccessful and operation becomes necessary, the delay will not injure the patient.

KELOIDS

Our experience with keloids shows that radium is an excellent remedy for them if used in season. All those of moderate size which we have treated have done well, though in some cases operation and other forms of treatment had been tried first without success.

Radium is also of value in other skin diseases, such as eczema, birthmarks, warty growths, psoriasis and the like.

CONCLUSIONS

1. The application of pure radium bromid in sufficient amount, properly used, is a harmless, painless and efficient method of treating early superficial new growths. Radium is well adapted to cancers of the face, as the cosmetic results are excellent, and particularly to the eyelids, where operation may offer special difficulties and disadvantages. With proper care there is no danger to the eye.

2. Operation is still considered to-day the method of choice in early skin cancers by most practitioners, but the results obtained here and abroad show, we believe, that radium should be used first in early cases and operation reserved for such as are not readily controlled by it.

3. Radium is more successful when it is the first treatment employed than when it is used after operation, x-rays, or other forms of treatment, although even under these circumstances it does well.

4. The number of treatments required in some cases is from two or three to ten, while in others more than twenty are needed. Improvement usually takes place after two or three applications of the radium.

5. Many people dread the knife, even for a simple operation, and fearing surgical interference will be advised, delay coming for treatment, thus lessening the chances of recovery. Radium is free from dread, as its action is painless.

6. The analgesic action of radium is noteworthy.

7. For keloids, unless extensive, radium is by far the best treatment known to us.

8. Where radium is obtainable, it would be well to use it for skin lesions of small area which do not heal readily under simple applications.

9. All powerful remedies have dangers, but they can be avoided if care is taken. During the seventeen years the x-rays have been used at the Boston City Hospital no patient has been burned, nor have any untoward results occurred in about ten years during which radium has been employed there.

505 Beacon Street.

A METHOD OF BONE-PLATING *

CARL E. BLACK, A.M., M.D.

JACKSONVILLE, ILL.

A study of the work of Mr. Lane and his followers and a comparison of it with that of Lambotte[1] and his followers, will convince one that the last word has not been said on retaining the fragments in the operative treatment of fractures.

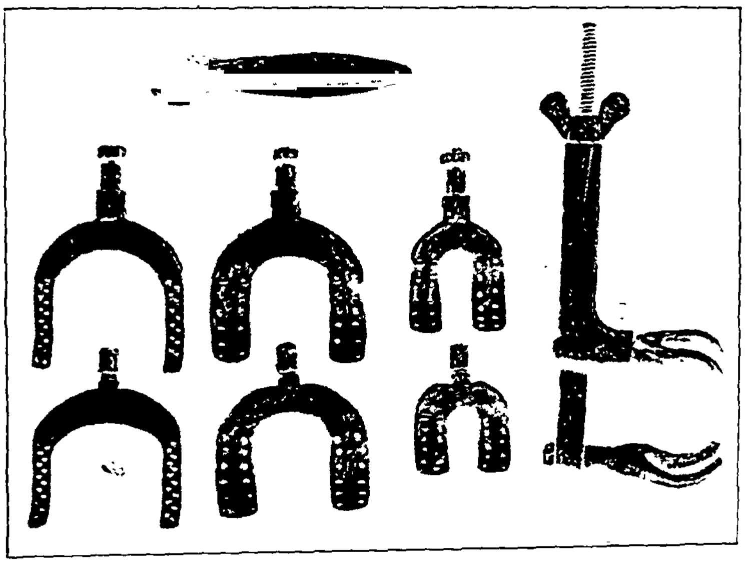


Fig. 1.—Clamp for holding bone fragments in position while plate is applied. It is purposely designed not to hold the plate under the clamp.

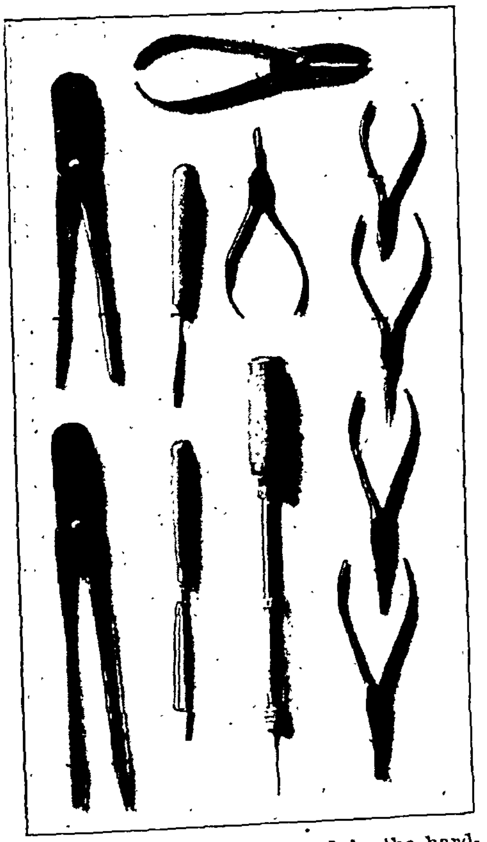


Fig. 2.—Tools purchased in the hardware store used in experimental bone plating and also in a number of cases at the operating-table.

While I cannot claim an extended experience, the cases in which I have operated have impressed me with two points: first, the necessity of providing myself at all times with as full an assortment of plates as if I had a large accident clinic, and second, the fact that the ordinary plates have too much bulk and are too heavy.

In support of the latter statement I quote the following sentence from Mr. Lane:[2] "The chief obstacle that has to be overcome in many cases is the approximation of the skin incision and their retention in accurate apposition."

I venture to present a plan of bone-plating which is new so far as I know. I have not yet had sufficient experience to present conclusions but offer it as a suggestion for trial.

In dealing with fractures the object to be attained is correct apposition. This includes several important points. The normal length and correct contour must be maintained. Fragments may have to be held in position and the companion bone or the neighboring joint may have to be dealt with. It may be fairly assumed that no one plan is equally well adapted to all cases and that any plan may have to be modified to meet the requirements of each case.

Proper tools have not yet been developed. Most of those on the market are altogether too heavy and cumbersome for rapid and accurate work. Awkward and unwieldy instruments interfere with asepsis. We need to study the clockmaker, the locksmith and the cabinetmaker and their equipments. Either might make a better "bone surgeon" than the average general surgeon had he the aseptic technic. Unfortunately for the mechanics of the work, asepsis is of first importance.

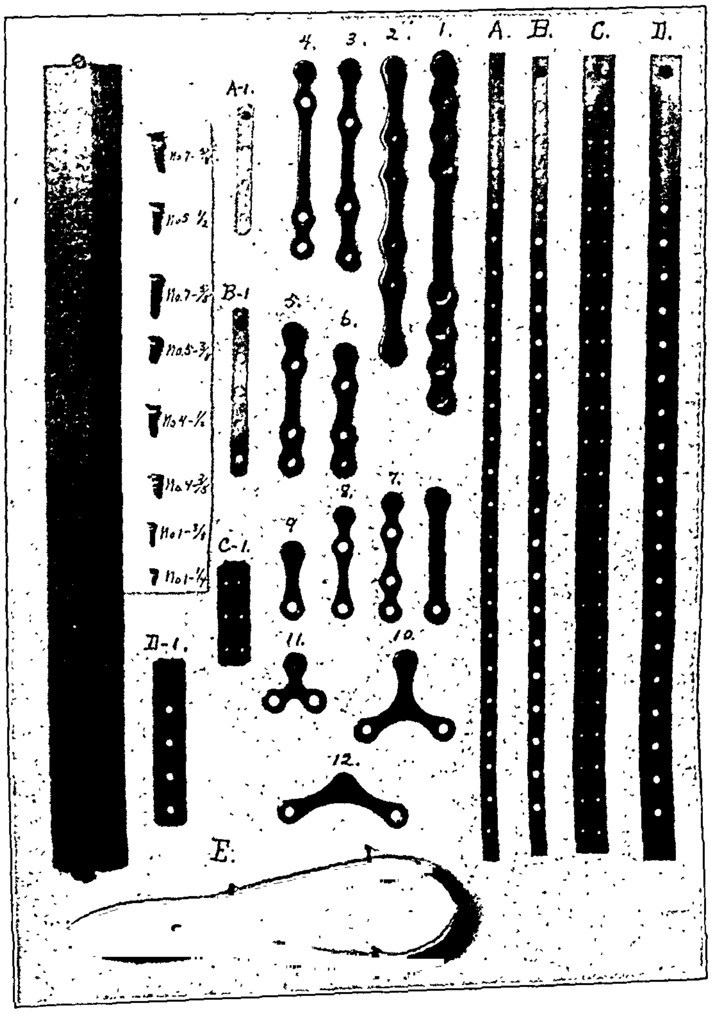


Fig. 3.—Lane's plates and screws of various sizes and steel ribbon proposed. Nos. 1 to 10, Lane's plates in various sizes. No. 5 to No. 7 screws used for Lane's plates. No. 1 and No. 4, screws in two sizes, ¼-inch and ⅜-inch. A, B, C, D, steel ribbon in two sizes punched for No. 1 and No. 4 screws. A and B are ¼-inch wide and 1/128-inch thick; C and D are ⅜-inch wide and 1/64-inch thick. A-1, B-1, C-1, D-1, plates made at operating-table from steel ribbon. E, shears for cutting steel ribbon.

Every operator has experienced difficulty in retaining the fragments in proper apposition while the plate is being applied. In order to overcome this difficulty the bone-holding clamp illustrated in Figure 1 was devised. It consists of several pairs of blades, each blade having two fingers. These are of several sizes and widths according to the bone to be plated as well as the size and shape of the bone at the site of the fracture. The

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* Read at the Twenty-Second Annual Meeting of the Western Surgical Association at Cincinnati, Dec. 21, 1912.

[1] Lambotte: L'Intervention opératoire dans les fractures, Lamertin, Brussels, 1907, p. 45.

[2] Lane: Lancet, London, Nov. 4, 1911, clxxxi, No. 4601.

blades are freely movable in the handle and adjust themselves to the contour of the bone. It is purposely designed not to hold the plates under the clamp but to permit the application of the plates between the blades of the clamp. Ample room has been left for this purpose.

Many of the instruments on the market for bone-plating are poorly adapted to the work. I have had far more satisfaction with certain tools which I have purchased in the shops. Some of these are illustrated in Figure 2. All have been used both at the operating-table and in experimental bone-plating, and they suggest needed modifications in our armamentarium. These consist of two pairs of plumbers' pliers, which make excellent bone-holding forceps; two locksmiths' screw-drivers, one with a screw-holding device; one Yankee drill which can be worked quickly and accurately with one hand; five pairs of small machinists' pliers, which are useful for many purposes, including adapting the plates to the contour of the bone, removing spiculae and holding small bones and fragments; and a locksmith's metal shears used at the operating-table for making the plate the desired length or shape. These tools could be improved by an instrument-maker but should not be modified so as to lose their mechanical adaptability.

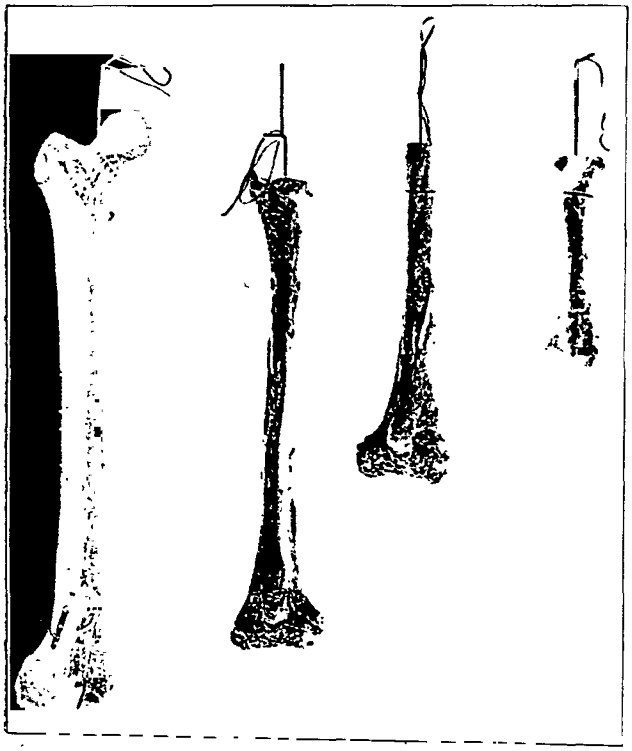

Fig. 4.—Front view. Illustrations of experiments in contour bone-plating with steel ribbon ¼-inch wide and 1/128-inch thick, carrying No. 1 ¼-inch screws

I cannot subscribe to the dictum of Lane[3] that "In the vast majority of cases I prefer to use as long and as strong a steel plate as possible, carrying as many screws as space permits."

The average plate sold in the shops is altogether too bulky, being made to depend on its bending or breaking strength for success. After a certain point the strength of the plate is only what the screw will hold in the bone. The bones are a system of supporting levers with reinforcement at the points of strain and are not designed to depend simply on their bending or breaking strength. The plating of a fracture, which is only a temporary device, should be done on the same plan, and should have the least bulk consistent with providing the support and meeting the strain required during the period of healing. The plan I suggest might be called "contour" plating in contradistinction to direct plating, which relies on the breaking strength of the plate. If the plate is applied in the direction of the strain by which the fragments are likely to be displaced a light plate and screw can be used.

In trying to carry out this principle I have used untempered clock-spring steel of various thicknesses and widths. Tentatively I have adopted two sizes. These metal strips are illustrated in Figure 3 and may be compared with the Lane plates which are generally used for the same purpose. The ruler at the side of the illustration gives the reader the comparative length and size. *A*, *B*, *C* and *D* illustrate the strips of steel ribbon that I use. The first (*A*) is a steel ribbon ¼ inch in width, 1/128 inch thick and 12 inches long with holes for No. 1 screws placed ½ inch from center to center. The second (*B*) is of the same dimensions, but is punched with holes for No. 4 screws placed as in *A*. The third (*C*) is a steel ribbon ⅜ inch wide, 1/64 inch thick and 12 inches long, punched with a double row of holes for No. 1 screws placed likewise ½ inch from center to center. The two rows of holes in this strip are 3/16 of an inch apart. This strip provides for a large number of small screws where the bone is fragile or fragmentary. The fourth strip (*D*) is of the same length and breadth and thickness as the third but has holes for one row of No. 4 screws placed as in the others, ½ inch from center to center. It is important to have all the holes exactly the same distance apart so that in special cases several

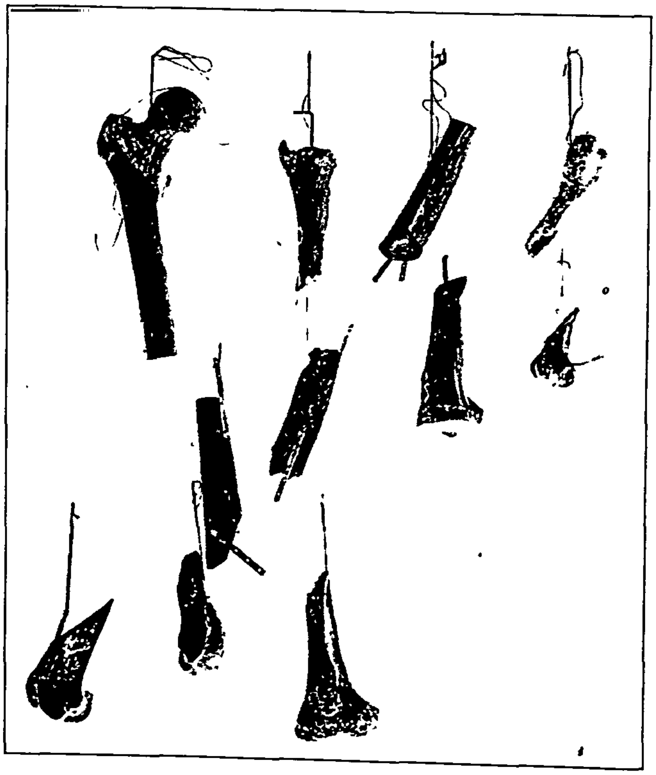

Fig. 5.—Fragments separated. Illustrations of experiments in contour bone-plating with steel ribbon ¼-inch wide and 1/128-inch thick, carrying No. 1 ¼-inch screws.

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[3] Lane: Lancet, London, June 12, 1909.

thicknesses of plate may be used, although in actual work at the operating-table I have rarely found this necessary. I use only two numbers and two lengths of screws, namely, No. 1 screws ¼ inch long and ⅜ inch long, and No. 4 screws of same lengths. These two sizes and lengths I find ample for all cases. The metal shears (*E*) are used for cutting the strips in any desired length. This is done at the operating-table. Plates prepared in this way are illustrated by *A*-1, *B*-1, *C*-1 and *D*-1 (Fig. 3).

The advantages which suggest themselves for this method are that plates may be adapted to accurately fit any contour at the operating-table and that these may be made as long or as thick as may be desired. Usually the narrowest and thinnest plates placed on both sides of the bone in a direction to meet the greatest strain which will be applied by muscular action will meet every indication.

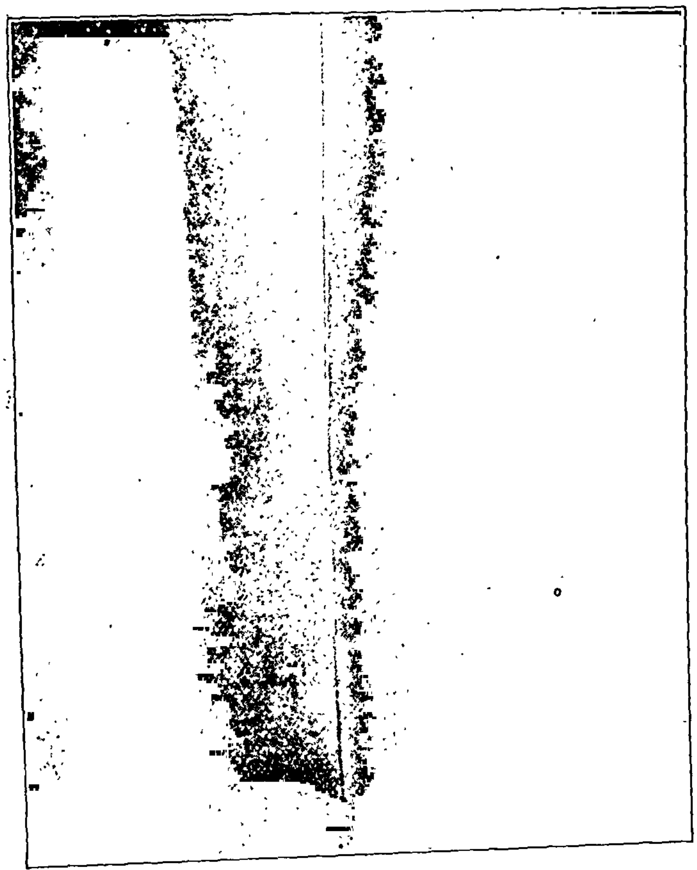

Fig. 6.—Fracture of middle of humerus. Man aged 40 years. Retained by two ¼-inch ribbon plates, 1/128-inch thick with No. 1 screws ¼-inch long.

Before applying this plan at the operating-table I made numerous experiments on various bones to test the strength of these bits of steel ribbon put on with the small screws. A few of these are illustrated by several artificial fractures in the human femur and two tibiae and a sheep's femur as shown in Figures 4 and 5. The two pictures show the front and sides of each bone and, finally, the separated fragments. These were selected to show the ribbon plates in several positions and directions according to contour and position. The sheep's femur was used to test the strength of No. 1 screws in fresh bone. These illustrations show what is meant by contour plating in contradistinction to direct plating as practiced by Lane and others. If one can judge by the force which these bones will withstand the thin plate would seem to be sufficient. The real strength is in the screws and if one plate is placed opposite another, or a single plate in a position and direction to meet the strain, instead of a bending strain there is a pull put on the plate. In other words, we follow the principle of the lever and can secure from one or more narrow thin steel ribbons more strength than from twenty times the weight of steel in one large plate so placed as to depend on its bending or breaking strength. The plan is especially adapted to torsion fractures in which the ribbon can be so placed as to overcome the twisting strain. In this way the screw is enabled to give a maximum of efficiency, or rather we make a small screw and a light plate furnish more strength than a heavy plate and a large screw would furnish under direct strain.

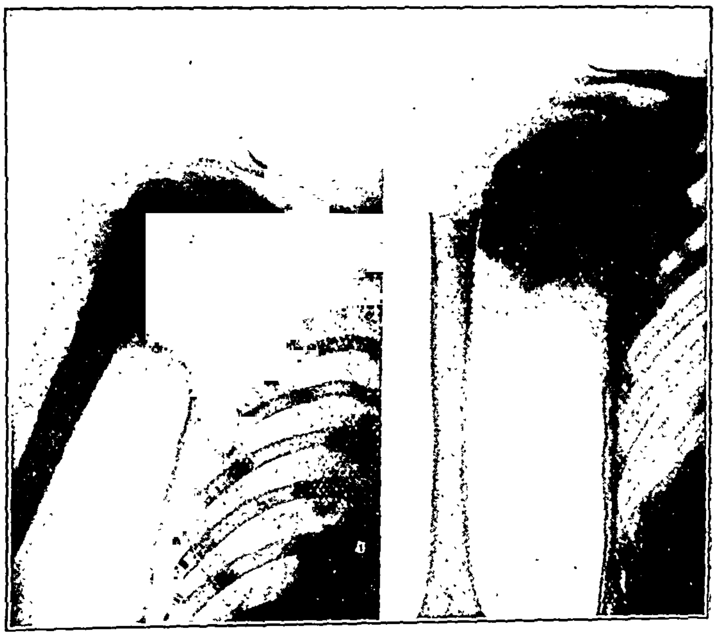

Fig. 7.—Fracture of humerus. Boy aged 6 years. Retained by ¼-inch steel ribbon and ¼-inch No. 1 screws. Note length of screws in the bone.

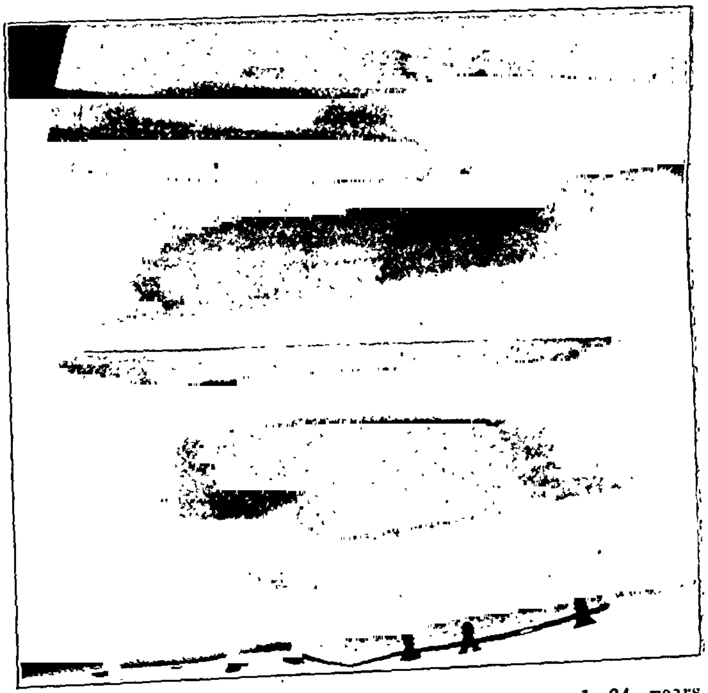

Fig. 8.—Compound fracture of tibia. Man aged 64 years. Retained by two ¼-inch steel ribbons and ¼-inch and ⅜-inch No. 4 screws.

The smallest plate sold in the market is three to six times as thick as the thin steel ribbon here shown; the heaviest is twenty times as thick and the screws are in proportion. It is useless to have the screws extend beyond the dense bone. Most of those used in plating are too long. The dense screw-holding bone is rarely found more than ¼ inch thick and it will not average more than ⅛ inch.

I have selected a few illustrations from cases in which I have recently used the ribbon plates at the operating-table. The legends under Figures 6, 7 and 8 explain sufficiently actual cases of fracture in which the steel ribbon plate has been applied at the operating-table as described in the first part of this paper.

SUMMARY

By using these thin steel ribbons the space for the accumulation of blood and serum is comparatively small and infection less likely; the periosteum can be more nearly approximated; the remaining foreign body is from three to ten times less; the fascia and skin can be carefully approximated without the least difficulty.

AN OPERATION FOR VENTROSUSPENSION BY THE ROUND LIGAMENTS

HAROLD NEUHOF, M.D.
NEW YORK

The *most* widely *practiced* operation for the cure of retroflexion and retroversion of the uterus is Olshausen's ventrosuspension by the round ligaments. This procedure has been *found satisfactory in many hundreds* of instances and may be termed the standard operation for the condition under consideration. From time to time, nevertheless, cases have been described in which acute intestinal obstruction has resulted from the bands that are the direct outcome of Olshausen's operation.[1] Indeed, the originator of the method has himself reported such an instance; it is surprising that intestinal obstruction has not been more frequently encountered or, perhaps, more frequently recorded. There are two additional objections to Olshausen's procedure: (1) It has been followed by recurrence of the malposition of the uterus in a few instances because the bands became excessively elongated; (2) the deep epigastric vessels have been injured during the operation (when the suspension suture traverses the abdominal wall). The chief objection to the operation in my mind, however, is that the deliberate construction of an intra-abdominal band is an unsurgical principle both in theory and in practice. I believe that this objection is obviated by the following technic:

After the abdomen has been opened through the usual median incision and the necessary treatment of the pelvic organs has been carried out, the uterus is grasped and is held at whatever level one desires to suspend it. The region in which one round ligament leaves the abdominal cavity is exposed by retracting upward on that side of the wound. A catgut suture is then begun at the internal abdominal ring by passing the needle through the ligament and the adjoining parietal peritoneum. The suture is continued by alternately grasping the round ligament and the parietal peritoneum, with the overlying transversalis fascia. The suture is continued to within a short distance of the uterine horn and is here ended. The needle should take broad grasps of both the round ligament and the parietal peritoneum, with adjoining transversalis fascia, as illustrated in the diagram. To avoid atrophy it is essential that the suture pass through and not around the round ligament. After the suspension of one round ligament has been *completed, the opposite* side is treated in the same manner. The abdominal wound is closed in the usual way, the parietal peritoneum being preferably sutured by the everting stitch suggested by S. Wiener and myself in order to avoid omental adhesions.[2]

This operation has been performed in only a few instances and has been found simple of execution. It was first carried out about four years ago; the patient was recently examined and presented a movable uterus in good anterior position. A second patient passed through a normal pregnancy following the operation and subsequent examination demonstrated that the uterus remained in the anterior position. Another patient was subjected to a laparotomy for a different abdominal condition ten months following ventrosuspension by the above-described technic and occasion was taken to examine the field. The uterus was found in normal position and freely movable. On each side (the left side could be more thoroughly inspected) the round ligament was suspended *from the* anterior abdominal wall by a narrow sheet, averaging one quarter inch of peritoneum, in which gaps were not to be found. The round ligaments were quite normal in appearance.

The advantages that have been claimed for this method of ventrosuspension would appear to warrant a *more extended application of the technic* in order to determine whether or not these claims are justified.

1275 Madison Avenue.

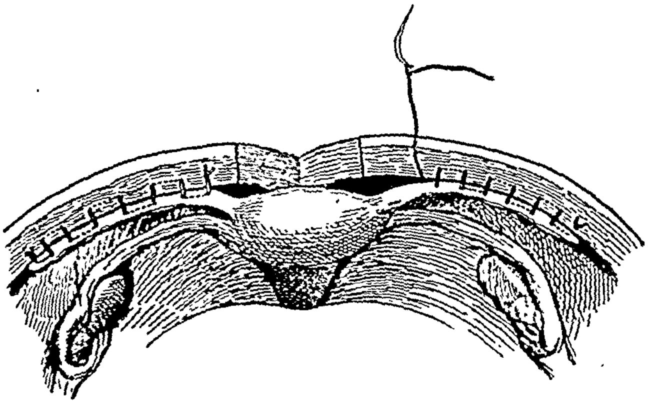

Fig. 1.—Diagram to illustrate the method of passing the suspension sutures.

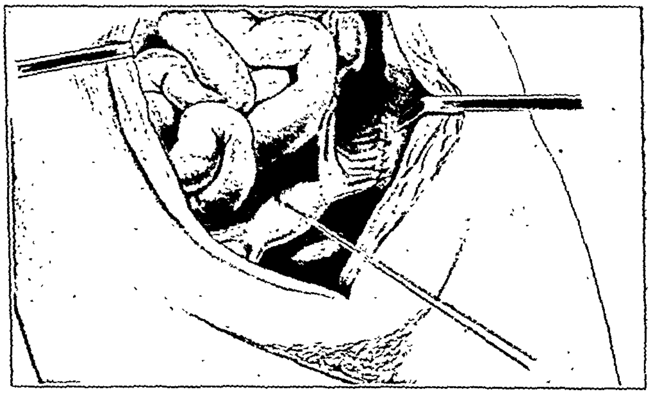

Fig. 2.—Illustration of the operation of suspension by the round ligaments made from a cadaver. The suture is incorrectly shown; it should be passed through and not around the ligament.

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[1] Some case reports are to be found in Treves' monograph on Intestinal Obstruction: Veit's Handbuch der Gynäkologie, Vol. I; and Guggisberg: Incarceration of the Intestine after Ventrofixation of the Uterus, Zentralbl. f. Gynäk., [illegible], p. 1261.

[2] Neuhof, H., and Wiener, S.: Experiments on Omental Adhesions, Surg., Gynec. and Obst., April, 1910.

Special Articles

TYPHOID IN THE LARGE CITIES OF THE UNITED STATES

There were fifty cities of over 100,000 population in the United States in 1910. Over 22 per cent. of the whole population of the country lives in these cities and in addition a large suburban and satellite population is influenced by the health conditions of the neighboring metropolis. It is safe to say that more than one quarter of the population of this country is directly concerned in the prevalence of typhoid fever in our large cities. Since the modes of causation and methods of prevention of typhoid are better understood than is the case with some other infectious diseases, it has seemed worth while to present facts showing the actual conditions together with data indicating the recent trend in the typhoid death-rate.

The large cities may be divided conveniently into five groups:

1. Eight cities with a population over 500,000.
2. Ten with a population from 300,000 to 500,000.
3. Ten from 200,000 to 300,000.
4. Twelve from 125,000 to 200,000.
5. Eleven[1] from 100,000 to 125,000.

The data may be presented in tabular form. In compiling and calculating the figures for these tables, city records of deaths have been used, and the population has been estimated by the arithmetical method used by the Census Bureau.

TABLE 1.—DEATH-RATES FROM TYPHOID IN CITIES OF GROUP 1 (POPULATION OVER 500,000)*

	Deaths from Typhoid per 100,000 Population 1912	1911	Average 1906-1910
Cleveland	5.9	14.7	16.5 (5)
Chicago	7.5	10.8	15.5 (2)
Boston	8.1	9.3	16.0 (3)
New York	9.8	11.1	13.8 (1)
St. Louis	10.4	15.4	16.1 (4)
Philadelphia	12.5	14.1	42.1 (7)
Pittsburgh	12.7	25.8	74.3 (8)
Baltimore	23.9	27.2	34.6 (6)

* The figures in parentheses in the last column of this and the following tables give the relative standings in death-rate, 1906-1910, of the cities in the group.

The most striking fact with respect to the group of our eight largest cities (Table 1) is the great reduction that has occurred in the typhoid rate in Philadelphia and Pittsburgh. Both of these cities, as is well known, have recently installed sand filters for their water-supplies, and the low typhoid rates in 1911 and 1912 as compared with preceding years must be attributed chiefly to the diminution in the amount of water-borne typhoid. Part of Pittsburgh (the north side) is not yet supplied with filtered water. In the "Pittsburgh filtered-water district," with a population of about 410,000, the typhoid rate in 1912 was only 5.9. The case of Cleveland is also noteworthy. The Cleveland water-supply is at present more or less exposed to contamination with the city's own sewage, although opinion differs as to the exact degree of danger.[2] In 1912 the water supplied to Cleveland was treated with hypochlorite, and a significant drop in typhoid fever was recorded. The water-supplies of Chicago, Boston and New York have remained essentially unchanged during the period covered by these figures. Whether the considerable reduction in the typhoid rate in these cities shown in 1911 and 1912 is due to an increase in the consumption of heated milk as suggested by one writer[3] is worthy of consideration.

Baltimore at present stands practically alone in this group with a typhoid rate nearly twice as high as that of any other city. Even in Baltimore, however, marked improvement seems to have taken place following the treatment of the water-supply with hypochlorite beginning January, 1911. In 1912 the typhoid rate was the lowest in the sanitary history of the city.[4]

Altogether, if we except Baltimore, there is reason for some satisfaction over the typhoid situation in the group of our largest cities. Reasonably steady improvement in the typhoid death-rate is shown in nearly all cases, and in the last two years there has been an approximation in several instances to the rate in some European cities that have long been held up as a model. Cleveland, Chicago and Boston all had a lower typhoid rate in 1912 than the London average for 1901-1905 (8.5).

Without exception the typhoid average for all the cities in this group was lower in 1911-1912 than in the five years 1906-1910.

TABLE 2.—DEATH-RATES FROM TYPHOID IN CITIES OF GROUP 2 (POPULATION FROM 300,000 TO 500,000)

	Deaths from Typhoid per 100,000 Population 1912	1911	Average 1906-1910
Newark, N. J.	7.1	10.3	14.6 (1)
Cincinnati	7.5	11.7	30.0 (7)
Buffalo, N. Y.	11.4	25.1	22.8 (3)
Minneapolis	11.5	11.6	32.2 (8)
New Orleans	14.0	30.7	35.6 (9)
San Francisco	14.1	15.6	27.3 (6)
Los Angeles	14.6	12.6	19.0 (2)
Detroit	17.1	15.6	23.4 (4)
Washington, D. C.	21.2	20.9	36.9 (10)
Milwaukee, Wis.	25.3	19.3	27.0 (5)

The marked improvement in the water-supply of Cincinnati is reflected in the lowered death-rate from typhoid fever in that city for 1911 and 1912. In fact, the reduction is far greater than appears from these figures (Table 2) since the rates for 1908 (18.8), 1909 (12.8) and 1910 (5.7) fall in the pure-water period and are much below the rates for 1906 (68.5) and 1907 (44.5). Minneapolis, also, shows in its lowered death-rate the probable effect of the use of hypochlorite on the city water-supply. THE JOURNAL has already described in some detail the situation in Detroit[5] and Milwaukee.[6] Little change seems to have taken place in typhoid conditions in either city since the investigation by the representatives of THE JOURNAL in 1910. Detroit, as well as Milwaukee, should take action in respect to its water-supply. In 1896-1900 Milwaukee and Detroit had the lowest typhoid rates in this group of cities; now their relative position is among the worst. They may well contrast their typhoid-fever death-rates with those of the lake cities that have pure water-supplies.

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[1] Hartford, Conn., is included in this group; the population in 1910 was 98,915, but it is thought now to have passed the 100,000 mark.

[2] Jackson, D. D: Report on Sanitary Condition of the Cleveland Water-Supply, May 25, 1912; Jackson, G. S., and Perkins, R. G.: Typhoid in Cleveland in 1911, Cleveland Med. Jour, 1912, xi, 816.

[3] Jordan, E. O.: The Case for Pasteurization, THE JOURNAL A. M. A., Oct. 19, 1912, p. 1450.

[4] Ford: Johns Hopkins Hosp. Bull., 1911, xxii, 53; ibid., p. 351; ibid., 1913, xxiv, 108. Ford and Watson: ibid., 1912, xxiii, 275. Stokes: Bull. Med. and Chir. Fac., Maryland, 1912, v, 73.

[5] Typhoid in Detroit, special article, THE JOURNAL A. M. A., Oct. 8, 1910, p. 1284.

[6] Typhoid in Milwaukee, and the Water-Supply, special article, THE JOURNAL A. M. A., July 16, 1910, p. 211.

The exhaustive and prolonged investigation of typhoid conditions in the national capital is too well known to our readers to need discussion here.[7] Whatever the cause may be, the decline in typhoid fever in Washington since 1906 is noteworthy. The low rate reported by New Orleans in 1912 is interesting.

All the cities in Group 2, like those in Group 1, show a lower typhoid average for 1911-1912 than for 1906-1910.

TABLE 3.—DEATH-RATES FROM TYPHOID IN CITIES OF GROUP 3 (POPULATION FROM 200,000 TO 300,000)

	Deaths from Typhoid per 100,000 Population		Average
	1912	1911	1906-1910
Seattle, Wash...........	7.4	9.4	25.2 (6)
Jersey City, N. J........	7.5	6.2	12.6 (2)
St. Paul, Minn..........	10.2	10.0	18.0 (4)
Providence, R. I.........	10.3	12.2	14.3 (3)
Rochester, N. Y.........	11.8	10.3	12.4 (1)
Kansas City, Mo.........	12.8	23.7	35.6 (9)
Denver	13.0	17.6	35.5 (8)
Portland, Ore...........	16.9	17.8	23.3 (5)
Indianapolis	18.3	26.2	30.4 (7)
Louisvile, Ky...........	18.9	25.6	52.6 (10)

Marked improvement in typhoid-fever rates is shown by every city in Group 3 (Table 3). The rates for 1912 are in every case below 20, the only group of which this can be said. Especially noteworthy is the case of Louisville, where the typhoid rate has fallen steadily since 1907, a circumstance that may be attributed largely, if not solely, to the improvement of the public water-supply.

TABLE 4.—DEATH-RATES FROM TYPHOID IN CITIES OF GROUP 4 (POPULATION FROM 125,000 TO 200,000)*

	Deaths from Typhoid per 100,000 Population		Average
	1912	1911	1906-1910
Paterson, N. J.........	4.6	21.2	19.3 (3)
Worcester, Mass.........	6.6	6.7	11.8 (1)
Scranton, Pa............	8.7	12.0	31.4 (6)
Oakland, Cal............	9.0	12.6	21.5 (4)
Richmond, Va............	16.2	17.4	34.0 (7)
Syracuse, N. Y.........	16.8	15.7	15.7 (2)
Columbus, Ohio	20.2	13.8	40.0 (10)
New Haven, Conn........	24.5	23.4	30.8 (5)
Toledo, Ohio	33.0	22.6	37.4 (9)
Atlanta, Ga............	35.2	55.8	58.5 (11)
Memphis, Tenn...... ..	56.2	61.2	35.3 (8)

* No reply was received from Birmingham, Ala.

Group 4 (Table 4) comprises several cities with very low and several with very high rates. Two cities (Syracuse and Memphis) have a higher average for 1911-1912 than for 1906-1910. Memphis has the unenviable distinction of maintaining for the past two years the highest rate from typhoid fever of any large city in the United States. The question may be asked why the Syracuse typhoid rate has remained stationary or even slightly increased while nearly every other large city in the country has shown a reduction.

Attention is also especially directed to New Haven by these figures. The typhoid rate in this city has been excessive for the last seven years. In 1912 only six large cities in the country, some of them with notoriously bad water-supplies, had a higher typhoid rate than New Haven. The position of this city is rendered more conspicuous by the fact that it is in a section of the country where low typhoid rates prevail. Eight other New England cities are included in our tabulation. All of these have a lower typhoid rate than New Haven, and five of them have a rate under 10 (New Haven, 1912=24.5). What's the matter with New Haven?

The citizens of Toledo may perhaps ask themselves why the typhoid rate in that city in 1912 should be five times as great as the rate in Cleveland. A rate of 33 in a Northern city would seem to call for drastic measures.

On the other side may be mentioned such very encouraging conditions as apparently exist in Worcester, Mass., where a very low typhoid rate has been maintained for two consecutive years, and the remarkable improvement that has been brought about in Richmond, Va.

TABLE 5.—DEATH-RATES FROM TYPHOID IN CITIES OF GROUP 5 (POPULATION FROM 100,000 TO 125,000)

	Deaths from Typhoid per 100,000 Population		Average
	1912	1911	1906-1910
Cambridge, Mass........	2.8	4.7	9.8 (1)
Bridgeport, Conn........	7.4	3.8	10.2 (2)
Lowell, Mass...........	9.2	6.5	13.9 (4)
Hartford, Conn.........	12.7	19.8	18.9 (6)
Omaha, Neb.............	13.2	45.1	40.8 (8)
Spokane, Wash..........	16.9	38.5	50.4 (9)
Albany, N. Y...........	17.7	17.8	17.5 (5)
Fall River, Mass.......	18.8	15.8	12.5 (3)
Nashville, Tenn.........	30.1	52.0	61.2 (10)
Grand Rapids, Mich.....	34.0	26.1	29.7 (7)
Dayton, Ohio	*	18.3	22.4

* No answer received from health department.

Three cities in Group 5 (Grand Rapids, Fall River and Albany) show no improvement in their typhoid rates for 1911 and 1912 over the preceding five years (Table 5). In view of the general trend of typhoid-fever rates in this country this should cause some searching of heart among the inhabitants of the last two cities named. Grand Rapids has until lately presented the familiar case of an increasing water-supply pollution, but the new water-purification plant just installed should improve the condition in that city very materially. The situation in Albany, which obtains its supply from the dangerously polluted Hudson River, but is provided with a well-constructed and well-operated sand-filter plant, has attracted comment from sanitarians. Some observers have expressed the suspicion that while the filter greatly reduced, it did not altogether remove the danger of water-borne infection. The question cannot be discussed here, but the failure of typhoid in Albany to decline as it is doing elsewhere gives food for thought. Cambridge, Mass., has the lowest typhoid average for 1911-1912 of any city in the country, thus keeping the place it held in 1906-1910.

The only cities with a higher average typhoid rate in 1911-1912 than in 1906-1910 are Memphis, Tenn., Syracuse, N. Y., Grand Rapids, Mich., Fall River, Mass., and Albany, N. Y.

Cities with an average typhoid death-rate in 1911-1912 *below 10* are Cambridge, Mass., Bridgeport, Conn., Worcester, Mass., Jersey City, N. J., Lowell, Mass., Seattle, Wash., Boston, Newark, N. J., Chicago and Cincinnati.

But one city in the whole fifty-one (Cambridge, Mass.), had an average below 10 for the five years 1906-1910.

"New Diseases" Not so Rare as Generally Supposed.—Family jaundice is a condition which has only been described within the last ten years or so, but, like many diseases which are believed to be rare, when once it comes to be generally recognized it will probably be found to be not so rare as was supposed.—Robert Hutchison, in *Clin. Jour.*

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[7] Rosenau, Lumsden and Kastle: Report on the Origin and Prevalence of Typhoid in the District of Columbia, Bull. Hyg. Lab., U. S. P. H. Service, Nos. 35, 44, 52 and 78.

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS*

(Continued from page 1622)

VI

INOCULATION INTERVAL

The interval between inoculations is also important, but hard and fast rules regarding it do not hold in practice. A too frequent repetition of a bacterial vaccine, especially in a large dose, tends toward a "cumulative negative phase," a state with clinical evidences of retrogression. Too rare inoculations, especially with small doses, fail to achieve the sustained high tide of immunity, thus resulting in slight or merely temporary clinical improvement.

Negative-Phase Reinoculation. — One rule derived from studies of the opsonic index has attained almost axiomatic importance. This is never to reinoculate during the negative phase. Vital as it is, this injunction seems largely to have escaped the attention of physicians using stock vaccines. Cases occur in which bacterial vaccines in amounts sufficient to arouse marked local reaction are inoculated at intervals of one, two or three days; and to make matters worse it often happens that these depressing and cumulative inoculations are made in one restricted injection-site. Weeks or even months may be required for Nature to compensate for the damage inflicted on the immunizing mechanism by such heedless practice.

Average Inoculation-Intervals.—In treating subacute and chronic infections, intervals of from five to ten days have been found to serve successfully. In acute infections, particularly if moderate doses of vaccine are used, some repeat the inoculation in from two to five days, believing that the positive phase is of short duration, and that a relapse will occur if the doses are spaced too far apart.

Cessation of Treatment.—Rarely a single dose of bacterial vaccine appears to render further treatment superfluous. It is not prudent, however, to rely on such a possibility in rapidly progressing localized infections, but assurance should be made doubly sure by repeating several times the dose of vaccine which appears to have elicited the satisfactory response. Even if these additional inoculations are not imperatively required, they provide harmless insurance against relapses, or reinfections which may convert an acute case, promising at the start, into a lingering chronic one. After prolonged treatment in chronic infections, especially as improvement reaches a maximum, the inoculation interval may be gradually lengthened so that treatment is not abruptly terminated.

Irrational Dosage.—Some radical departures in the matter of dosage and spacing have recently been advocated. One of these is the employment of serially increasing doses like the plan adopted by some workers for tuberculin therapy. Another is to shorten the inoculation-interval, to begin with small doses and quickly step up to larger amounts. These innovations are positively condemned by the consensus of expert opinion. They represent some of the blind gropings for success which argue against empiric-vaccine therapy with stock vaccines. If the practitioner is sufficiently skilled to prepare and use the right vaccine and to adjust the dose and inoculation interval of this vaccine exactly, no change is necessary. In fact, it would be prejudicial to success were the dose regularly increased or diminished, or the interval shortened. Accordingly too much emphasis cannot be placed on warning physicians relatively unskilled in practical vaccine therapy to avoid any scheme of dosage which calls for inoculations at short intervals with increasing doses of killed bacteria.

VACCINES IN ACUTE INFECTIONS

Bacterial vaccines were originally used only in chronic and subacute infections, and theoretically this limitation is justified. Accordingly it has come to pass that many excellent authorities prohibit the employment of vaccine therapy in acute infections. The danger of overturning the delicate balance in acute infections by imposing a negative phase is assigned as a reason for this prohibition, and, as has already been stated, this objection should never be ignored in the critical stages of severe general infections in case one is ever so venturesome as to undertake the treatment of such conditions with vaccines. But there are a goodly number of successful specialists in vaccine therapy who bring forth impressive testimony to show that one may go to extremes and deny the benefits of vaccine therapy to promising cases by excluding from its scope all the acute infections. These authorities produce clinical and experimental data favoring autogenous vaccine therapy in acute localized infections, particularly the traumatic wound infections and the sepsis of the puerperium. The astonishingly prompt improvement of both local and general conditions which follows the inoculation of a correctly graduated dose of autogenous vaccine in acute cellulitis, phlegmon or puerperal fever has been observed and recorded by a sufficient number of competent workers to justify its further trial. Such trials should, however, be confined to experts, and the tyro in vaccine therapy should studiously avoid the treatment of acute generalized infections with bacterial vaccines, especially with those of commerce, and if the treatment of acute localized infections is undertaken the utmost caution should be exercised.

UNTOWARD EFFECTS OF VACCINES

With uncontaminated bacterial vaccines in proper dose skilfully administered, direct harm is most uncommon, if, indeed, it ever occurs. Such accidents as have happened may be assigned to the following causes:

Excessive Dosage.—The harm attending the cumulative negative phase in subacute and chronic infections as induced by too large doses of vaccine, or by a correct dose repeated at too frequent intervals, has already been described. Besides this there is the danger of causing a sharp and possibly disastrous negative phase in the course of an acute infection like septicemia or pneumonia. Theoretically, at least, this is a possibility not to be disregarded. At the critical stage in such an acute disease, when the natural forces of immunization are hanging in the balance, it is conceivable that the depression of a marked negative phase induced by a bacterial inoculation may be the deciding factor against recovery. In practice it is extremely difficult to appraise this situation and to decide the delicate question as to whether the vaccine administered at the crisis of such an illness contributed to the unfavorable issue. In any event the possibility should be kept in mind and guarded against by endeavoring to avoid bacterial inoculations in acute infections when clinical evidence points to an impending crisis. When a state of overwhelming infection is plainly indicated, inoculations should be strictly avoided since they will inevitably fail, and such failure tends to the discredit of vaccine therapy as a whole, particularly to the lay mind.

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* This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

Contamination.—Bacterial vaccines may become contaminated during manufacture, as will be shown in a succeeding section. The risk in using such a vaccine is obvious and depends on the nature of the contaminating agent. There is also to be considered the contamination incidental to the manipulations of inoculation, as by imperfectly sterilized syringe, careless handling of the vaccine, or carelessness during the injection. The consequences of these manipulative errors usually are inflammatory indurations at the injection site, sometimes eventuating in abscess.

Allergy.—The phenomena of anaphylactic reaction are encountered as a rare event in the course of a series of bacterial inoculations. This reaction may be localized at the site of a previous inoculation which becomes temporarily swollen and irritated. More marked hypersensibility is shown by erythematous or other skin eruptions usually accompanied by itching; in still less frequent instances the acute angioneurotic symptoms of a serum anaphylaxis with transient or more persistent urticaria have been noted. There is, however, no record of fatal anaphylactic shock following the inoculation of bacterial vaccines.

COMMERCIAL STOCK VACCINES

Two particular factors serve to account for the incredible rapidity with which vaccine therapy has evolved from a specialized to a widely generalized pursuit; the pioneer paving of the way by the therapeutic serums, and the commercial exploitation of the new field.

Antidiphtheric serum was the first therapeutic biologic product to obtain general adoption by physicians, but its experimental and developmental stages were slow as compared with vaccine therapy. Difficulties attending its production were such as to take it out of the hands of the individual physician and to call for the facilities of a special institution. Federal, state or municipal agencies proving only partially adequate to meet the situation, the rise of private commercial antitoxin laboratories followed. The commercial manufacture is, however, under efficient control. Rigid biologic standards for therapeutic effectiveness have been established, and are enforced by federal inspection and license. The clinical indications for the use of antidiphtheric serum are usually clear, and the results of its administration specific. Accordingly, the manufacture of this serum can be centralized and its clinical employment can be entrusted safely to the whole profession.

But the centralized commercial manufacture and wide usage of bacterial vaccines have no justification as compared with antidiphtheric and other antiserums. Bacterial vaccines can, and preferably should, be made by the individual physician. There is nothing complicated or expensive in the process, and it is difficult to make sure of a proper control of the product in any other way. They have no standards of therapeutic effectiveness like the antitoxic units of antidiphtheric and antitetanic serums. Consequently the federal license can convey no guarantee of potency for any of the marketed bacterial vaccines. The physician who employs stock vaccines is obliged to trust a number of outside workers for the purity and efficiency of his remedy. Moreover, with few exceptions, there are no specific symptomatic indications for the clinical use of stock vaccines; nor are there any certain assurances of specific therapeutic effect. The bacteriologic culture test is the logical antecedent of bacterial therapy, and the physician who avails himself of this aid has prepared the way for the use of a correct corresponding vaccine, or better still, for the autogenous one.

Superiority of Personally Prepared Autogenous Vaccines.—The advantages of autogenous vaccine therapy are most certainly to be secured when all steps in the preparation and use of the vaccine are pursued by the practitioner treating the case or by some one with whom he is in close personal touch. If the exigencies of the situation are such that the practitioner must send his morbid material to some distant laboratory for identification of the bacteria and the preparation of the vaccines, there is little advantage in autogenous as compared with stock vaccines. It follows that autogenous vaccines should be made and used at first hand, their employment being based on the possession by the clinician of sufficient skill and experience.

PRESENT CONDITIONS UNSATISFACTORY

The situation as it now exists was foreseen by Wright, who several years ago warned against promiscuous vaccine therapy, and who defined the immunizator as one who had, by long preliminary training in bacteriology, immunology and clinical medicine, qualified himself to undertake the new development in medical practice. A protest against indiscriminate vaccine therapy was also voiced by Adami, who advised that the method be confined to those younger medical men whose laboratory training had prepared them to undertake and master it. Notwithstanding this sound advice, we are to-day confronted with a state of affairs totally disregardful of it, and ascribable in the main to commercial exploitation. To consider in detail the unsatisfactory features arising from such exploitation is now in order.

MISLEADING THERAPEUTIC CLAIMS

Bacterial therapy, even in the hands of its most skilled practitioners, is by no means an assuredly successful method of treating infections, and failures multiply as practitioners are less competent and are thus forced to rely on outside aid in the preparation of the remedial agents. It is natural that the manufacturers should stimulate an attitude of therapeutic optimism and minimize the drawbacks. Therefore, it has come about that in order to promote the sale of stock bacterial vaccines manufacturers have exaggerated the claims for their therapeutic effectiveness, at times to the point of the ridiculous, or even to the utterly preposterous.

One has but to review the advertising literature of any of the firms marketing stock vaccines to find misleading, overdrawn or entirely unfounded statements of curative virtues. To discuss these assertions in detail would exceed the limits of the present articles, and only a few of the more flagrant examples can be chosen.

(*To be continued*)

Necessity of Vital Statistics.—The earnest, intelligent health officer relies on statistics for an understanding of his field. A tax-collector cannot discharge his duties unless he knows the address of every debtor. A police bureau cannot protect society unless it knows the character and haunts of the degenerates. A health officer cannot execute the law for the protection of society's health unless he knows the haunts and habits of disease. For this he must [illegible] to vital statistics.—Dr. William H. Allen.

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SATURDAY, MAY 31, 1913

THE LAXATIVE ACTION OF SULPHATES

Various theories have been formulated in regard to the mode of action of those drugs which are familiarly known as laxatives or purgatives. Broadly speaking, they may be considered to behave in one of two ways: either they promote the motor functions of the bowel, and as the result of the heightened peristalsis cause the normally fluid contents of the intestine to be propelled to the rectum before the usual degree of concentration by absorption of water has taken place; or by some mechanism or other they permit a dilution of the intestinal contents whereby the latter remain more or less liquid or voluminous. In either case the end-effect is the same; for an undue accumulation of fluid masses in the intestine, whatever their origin may be, tends to bring about a vigorous reflex peristalsis whereby the bowel becomes emptied.

There is no longer any doubt that the various types of purgative agents have unlike modes of action. The uncertainty regarding the mechanism by which the purgation is ultimately accomplished has involved the so-called saline laxatives in particular and has long been a source of much speculation and experiment. The theories have oscillated between what may be termed purely physical (or physicochemical) and physiologic points of view, the intestinal membrane exhibiting something more than a merely passive rôle in the physiologic hypotheses. Without entering into the historic details of the subject we may recall that the earliest explanations postulated an osmotic exchange of fluid into the lumen of the intestine to dilute the concentrated solutions of salts ingested as laxatives. Buchheim showed that this was not sufficient to account for the fluidity acquired by the intestinal contents. He pointed out that the typical effect of the laxative sulphates, for example, is independent of the concentration of their solutions, and insisted that inasmuch as the sulphates are poorly absorbed from the intestine they retain the solvent in the interior of the bowel. Increased transudation has been called on to explain the increased fluidity of the intestinal contents following the use of the saline products; but more significant is the view championed particularly by Brieger and Hay, whereby the sulphates are assumed to provoke an unusually abundant secretion of intestinal juice into the bowel. From time to time the investigation of the possibilities here presented has been renewed, new methods of research being applied as the progress of science suggested them. In illustration of this the introduction of the Roentgen-ray procedure for following the motor behavior of the alimentary tract and the newer successful devices for observing the activity of isolated loops of the intestine *in vitro* may be cited.

The idea that the sulphates may act directly on the motor activities of the intestine has not yet been entirely abandoned. J. B. MacCallum believed that sulphates increase the irritability of the local nervous mechanism of the intestine so that its contents may act as a vigorous stimulus to peristaltic action. In this event subcutaneous injections of a soluble sulphate which would thus reach the intestinal wall by way of the circulation might be expected to perform the laxative functions as well as or better than the oral administration. This, however, is not so; for the parenteral administration of Epsom or Glauber's salts is more than likely to be followed by constipation. Yet the hypothesis of heightened peristalsis has had even more recent support.[1]

In the pharmacologic institute of Professor Kionka at Jena, Dr. Cobet[2] has lately taken up the problem of saline laxatives again. His interest has centered in the tenability of the hypotheses as to the rôle of osmosis, diffusion, secretion and deficient absorption, respectively, in the explanation of how magnesium sulphate (Epsom salt) maintains the essential fluidity of the intestinal contents which leads to purgation. The result of this experimental investigation has been to emphasize the vigorous secretion of intestinal juice into the bowel under the stimulus of the sulphate; it is this, according to Cobet, rather than simple diffusion currents which accounts for the inrush of liquid. The chlorid present in the secretion discharged into the bowel may be reabsorbed at lower levels of the intestine; but the water is largely retained within the lumen by the poorly absorbable sulphates. Reabsorption of fluid does not take place until the introduced sulphate solution has become greatly diluted. Accordingly if sulphate solutions of low concentration are administered orally, their volume must be decidedly large because the fluid becomes partly absorbed under such conditions.

It has been asserted that the presence of chlorids promotes the laxative effects of the sulphates. Cobet's experiments give a partial support to the contention; for they show that in the presence of hypertonic solutions, sodium chlorid in concentrations up to 0.6 per cent. is practically not absorbed at all in the upper portions of the intestine. Thus it may replace an equivalent amount of refractory Epsom salt or supplement it.

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[1] Tyrode: The Mode of Action of Some Purgative Salts, Arch. internat. de pharmacol., 1910, xx, 205.

[2] Cobet, Rudolf: Ueber die Resorption von Magnesiumsulfatlösungen im Dünndarm und die Wirkungsweise der salinischen Abführmittel, Arch. f. d. ges. Physiol., 1913, cl, 325.

The laxative action of the sulphates is further promoted by the vigorous secretion of mucus which they occasion. The intestinal surface becomes, as it were, more smooth and pliant, and the progression of the contents of the bowel is thereby facilitated.

TYPHOID IN THE UNITED STATES

We have been so accustomed in this country to regard the typhoid rates in our large cities as deplorably and inexcusably high that the facts recorded in a special article in this issue will come as a surprise to many of our readers. Collection and tabulation of these data have been prompted by the conviction that the actual typhoid conditions in American cities should be widely known both as an encouragement to those municipalities that have inaugurated comprehensive reforms in water-supply and sewage-disposal, and as an incentive to those still halting by the wayside. Perhaps the most significant fact is that in the last six or eight years a revolutionary improvement has been brought about in the water-supply of many large cities. Common fairness demands that in such cases as wide publicity be given to the present satisfactory condition as was given to the discreditable situation of a decade ago. It should be a matter of national pride that Philadelphia and Pittsburgh, for example, now have excellent public water-supplies and that the danger of contracting typhoid fever in those cities is relatively slight.

The data we have gathered emphasize strongly the need of insistence on a pure or purified water-supply as the first and most important step in a national campaign against typhoid fever. In practically all cases improvement in the character of a water-supply has been followed by a great, often a remarkable, typhoid diminution, as witness Cincinnati, Pittsburgh and Minneapolis. In nearly every city also in which the drinking-water has been good throughout the period covered by these figures, typhoid has been steadily declining. This is perhaps just what would be expected from the cumulative decrease in the number of carriers and consequent lessening in the opportunity for contact infection and food contamination. Every case prevented narrows the circle of infection. The prevention of thousands of cases, as at Pittsburgh and Philadelphia, avoids the formation of several scores of permanent typhoid carriers who might help to disseminate the disease throughout the country or remain for years to plague the community that produced them. However important the direct question of water-supply may be, this other factor should not be overlooked.

Another possible—indeed, probable—factor in the striking diminution in typhoid now going on in American cities is the rapidly increasing use of pasteurized milk. Sanitarians should closely study this phase of the typhoid problem more closely.

Whatever the underlying sources may be, it is gratifying to see that we are in a fair way to lose our national preeminence in typhoid mortality. The rapidity with which the change is taking place is surprising to even the best-informed of us. THE JOURNAL proposes each year to print a tabulation similar to that appearing in this issue with the hope of suggesting or accelerating further improvement. Typhoid fever does not belong in civilized communities; it is not a disease that American civilization can tolerate. It must go.

THE EFFECTS OF HIGH-FREQUENCY CURRENTS

With increasing knowledge as to the properties and manifestations of the electric current, the application of this form of energy in medicine ought to be put on a firmer basis of scientific certainty. Electric apparatus and electric treatment have now found a wide-spread use in practice. The critical observer and the conscientious physician are often at a loss to know what are the explicable features of electrotherapy, where the borderline between empiricism and rational procedure lies, and how "psychic" effects or quackery are to be distinguished from real and defensible phenomena. The exorbitant claims and the unbelievable results which have been associated with the medical uses of electricity need to be sifted and exposed before the eyes of the mystified initiate. The properties of electricity deserve to be clearly defined, and their appropriate uses succinctly outlined and interpreted.

Although it has long been known that the human body can be subjected to electric currents of high tension and high frequency without other effects than those attributable to the temperature manifestations induced thereby, extravagant claims are even now occasionally heard. For example, it has lately been stated that a few "treatments" with currents of from 1 to 3 amperes sufficed to increase the weight of an individual 14 kilograms. One might assume, on the face of such information, that the energy introduced in the form of the current had spared a corresponding amount of the body's store; but it has been calculated[1] that if such an increase of body-weight were in the form of fat, to supply the gain would require 260 daily treatments of two hours each, furnishing a daily current-energy equivalent to from 300 to 500 calories. On the other hand, it has been maintained that special modes of application of high-frequency currents may induce a loss of two pounds in a single treatment of half an hour's duration. This is equivalent to a loss of 9,000 calories in the form of fat. Such are some of the extreme claims on record.

Durig and Grau[1] have conducted a careful investigation of the influence of alternating currents of high tension and frequency on metabolism and other functions of the human body. The chief experimental difficulty is encountered in furnishing electrodes of sufficient surface to prevent harmful local heat effects where the current is applied. Success attended the liberal distribution

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1. Durig, A., and Grau, A.: Der Energieumsatz bei der Diathermie, Biochem. Ztschr., 1913, xlviii, 480.

of tinfoil over the limbs for this purpose, so that high-frequency currents of 1.9 amperes at 180 volts were transmitted to the body for twenty minutes, and in one case 1.8 amperes at 176 volts for two and one-half hours. The maximal contribution of energy in this way was 627 calories — the equivalent of nearly one-third the daily requirement of man at rest. The effect of this treatment was solely that of the heat manifestations. There was a rise in temperature, leading to increased frequency of the pulse and profuse perspiration. Metabolism was maintained within the bounds of what may be expected from comparable increases in temperature brought about in other ways. There was no alteration of the oxidative functions of the organism; there was neither storage nor undue waste of energy. When one bears in mind that the heat effects of the prolonged transmission of the current may be marked, leading to a distinct rise of temperature, it is not surprising to note a dilatation of the peripheral blood-vessels or of the kidney vessels with a consequent effect on the urinary secretion. These phenomena are in no strict sense peculiar manifestations of the use of electricity. They are the results of heat.

High-frequency currents have been credited with a germicidal influence on the body. Durig and Grau have considered this possibility also. It is not difficult to destroy microorganisms as a result of the high temperature which can be induced in mediums through which the currents pass. It is nothing short of dangerous, however, to attempt the destruction of these lower forms in this way in the body tissues; for, inasmuch as we are dealing with a pure heat effect and not a specific electric influence, the difference between the lethal temperature of the tissue to be preserved and the organism to be destroyed is too small to encourage efforts along this line.

Studies of the foregoing sort serve to distinguish the mystic from the obvious effects of certain forms of electric energy. It is always a grateful experience to be emancipated from bonds of uncertainty.

THE ELIMINATION OF MERCURY

The distribution and physiologic fate of compounds which are widely used in medicine, though perhaps secondary in importance to their pharmacologic performances, are yet deserving of careful attention. What occurs in the organism as the result of the introduction of drugs, be it curative or detrimental, is frequently in no small measure dependent on the course which they pursue in traversing the body and the channels which they follow in the process of elimination. Even with so widely used remedies as the compounds of mercury there are gaps in our knowledge which could be filled with profit for the understanding of the mode of action of this potent element. In one country inunctions are used by preference; in another internal therapy finds the most ardent advocates; elsewhere it is the intramuscular or intravenous administration of the diverse available mercurial products that meets with widest approval. The formulation of a rational judgment in respect to the conflicting merits will depend somewhat on the facts in respect to the actual absorption, transport and excretion of mercury under the various conditions and forms of administration that are practiced. The quantitative estimation of mercury in the tissues and excreta calls for refined chemical technic and analytic experience—hence the comparative paucity of reliable data.

Newer contributions by Dr. Buchtala[1] of Graz add important facts in this field. It has been asserted that after certain forms of mercury inunctions the entry of the element is in reality in volatile form through the respiratory tract. It is now apparent, however, that even after the use of non-volatile mercury salts the element is absorbed through the skin, which is attested by an excretion of mercury by the kidneys in quantities up to 1 or 2 mg. per day. After intramuscular administration of either soluble or insoluble compounds of mercury the daily elimination reaches decidedly higher figures—up to 5 mg. and over after the dosage employed in Buchtala's cases. This means, without doubt, that the concentration in the tissues and fluids is also greater; and from a purely theoretical point of view it might seem pharmacologically advantageous to have the effective agent present in greater abundance. It is by no means decided yet whether the mercury acts directly as an agent destructive to the infectious organisms which it is intended to combat, or whether the influence is an indirect one exerted in stimulating the body toward greater antitoxic effort.

Of especial practical prominence is the contention that the kidney cannot excrete more than 10 mg. of mercury per day without liability to damage. Renal irritation and albuminuria are prominent symptoms. The question is thereby raised whether the injection of masses of insoluble mercury compounds under the skin to serve as depots for slow solution is an entirely safe procedure. This certainly is the case only when an unduly rapid solution and transport of the mercury will assuredly not ensue. In the light of what has been said the method is at best a questionable one and is discountenanced in certain quarters.

The use of iodids in conjunction with mercurial treatment in the medication of syphilis is believed to be attended with favorable consequences. The newer investigations have shown that after the simultaneous use of these drugs there is a tendency toward a lowered output of mercury in the urine. The real significance of this finding is not yet apparent. Possibly the formation of insoluble compounds of mercury and iodin or of soluble but little ionized mercury-iodin compounds will furnish an explanation of the delay in the excretion.

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[1] Buchtala, H.: Ueber das Verhalten des Quecksilbers gegenüber dem menschlichen und auch tierischen Organismus bei den üblichen therapeutischen Applikationsarten, Ztschr. f. physiol. Chem., 1913, lxxxiii, 249.

Animal experiments show that the path of elimination for mercury is not solely by way of the kidneys. The bowel may also participate in the excretory function, quite in harmony with what is observed in the case of various other elements.

CHINESE DRUGS AND MEDICAL ADVERTISING

The therapeutic ways of those nations that have not yet been introduced to the scientific medicine taught and practiced by our medical schools are always of interest. Not infrequently the empiric procedures which are handed down from one generation to the next carry with them an element of value which modern investigation has discovered and justified on the basis of accurate tests. In this manner various drugs have found their way into the practice of to-day and retained a place for themselves, though perhaps not always in the crude form in which they were originally exhibited before the era of isolated chemical "principles." History furnishes abundant examples of drugs or plant products with reputed and attested curative virtues that were recognized long before experimental pharmacology reached even an incipient stage.

Professor Santesson, the pharmacologist of the Carolingian Medicochemical Institute at Stockholm, in Sweden, has furnished some interesting notes on a somewhat unique Chinese "medicine" which he obtained through authentic sources from the East.[1] It is reputed to have a strong digitalis-like action. The description of the container itself indicates a degree of artistic ingenuity scarcely equaled by our own purveyors of drugs with mystic potency. The miniature urn and carton, the highly colored silk and paper wrappers, all add to the impression of something with dignified efficiency. The product itself consisted of minute black grains, emitting a faint odor of musk. The chemical and pharmacologic investigation, though not exhaustive, indicated the presence of a glucosid of the digitalis group, presumably like strophanthin, as the chief component of the granules. The reputed potency and the toxicity of the preparation are thereby explained.

A translation of the "advertising literature" (in Chinese) which accompanied the package is worthy of repetition. It reads:

> The "Look Zung" pill may be used for infective wounds; epidemic cases of sore throat; ulcers of the throat and diphtheria; diseases of the breast; and in all cases in which no liquid (like tea or soup) can be taken. The use of ten of these pills, dissolved in boiling water and slowly swallowed, invariably effects a specific cure. In serious cases repeat the dose.
>
> The pill also cures boils, abscesses and carbuncles; cancer of the stomach and intestines; cancer of the breast; and all kinds of inflammation and poisoning.
>
> Further, in children suffering from dangerous cases of croup and laryngismus stridulus, ten of these pills, dissolved in boiling water and taken, will give immediate relief.
>
> It is indeed impossible to mention all the specific uses of this pill.

Obviously this descriptive circular gives little clue as to the composition or specific value of the product—which leads the Swedish investigator to remark that the Chinese appear to be quite as expert in the extravagances of medical advertising as are any European or American firms.

THE BACTERIAL EXAMINATION OF WATER

Much interest has been aroused in the report of the committee that prepared the latest edition of "Standard Methods of Water Analysis."[1] We have already referred[2] to the wide-spread criticism of the 37-degree bacterial count. Chamot[3] has recently taken up the whole subject in a broader way, and has made a number of suggestions that will appeal to those analysts who have feared lest the bacterial examination of water might be degenerating into an unintelligent routine procedure.

The ease with which colony counts may be made and gas formation in sugar broth determined has tended to emphasize the accumulation of data rather than their interpretation. Comparative results have often been considered quite as much from the point of view of method-testing as from that of the actual conditions that they reveal. That we have still much to learn about the "permissible limit" of *Bacillus coli* numbers, about varieties of *B. coli,* about the significance of gas-producing bacteria, about seasonal conditions and many other matters, no experienced observer can doubt. As pointed out by Chamot, it is hardly in accord with the scientific spirit to limit ourselves to any one or to any half dozen methods in attempting to solve the problems of water bacteriology.

The specific case of the gelatin plate is a pertinent one. It is true that the bacteriologist who is familiar with gelatin-plate results can often obtain significant information about the character and history of a water better by this means than by any other. We are certainly not justified in omitting any expedient that can throw light on a doubtful case.

One cardinal principle of water analysis needs to be kept constantly in mind, namely, the fact that the bacterial condition of a water at the time of its examination does not necessarily give any information about its liability to pollution, past or present. In two recent instances known to us, public water-supplies were pronounced by analysts innocent of causing extensive typhoid fever outbreaks, but the epidemiologic investigations that followed showed the water to be unquestionably responsible. It cannot be emphasized too strongly that the absence or great scarcity of *B. coli* in a public water-supply at a given time does not mean that *B. coli* and even typhoid bacilli were not abundant in that supply two weeks before.

In the discussion of the "Standard Methods" now going on and in the revision sure to follow, the fact should not be lost sight of that the object of the bacterial examination of water is not merely to determine the condition of the water at the time the examination is made, but to obtain all the information possible about the character of the water, and especially to discover as far as possible the probabilities and possibilities of future danger in using water drawn from a given source. All the information derived from local inspection, from bacterial examination and from chemical examination will not be too much in many cases to draw on in passing judgment. If our aim is to form an opinion about a water source, common sense and scientific prudence alike will demand that that opinion be based on a study of all available data.

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[1] Santesson, C. G.: Ein chinesisches Medikament, Skandin. Arch. f. Physiol., 1913, xxix, 37.

[1] Am. Pub. Health Assn., New York, 1912.

[2] Standard Methods of Water Analysis, Current Comment, The Journal A. M. A., Feb. 1, 1913, p. 374.

[3] Chamot: Am. Jour. Pub. Health, 1913, iii, 371.

EVIDENCES OF ARSENICAL POISONING

When death by poison is suspected, the court of inquiry is usually satisfied with proof of the presence in the body of a substance which is capable of producing the lethal outcome in a manner such as that in which the victim is known to have died. Sometimes there is an additional demand that the presence of a fatal dose of the poison shall be demonstrated. It rarely happens that a complete and exhaustive chemical analysis is called for in judicial investigations, since such examinations are lengthy and expensive and frequently would furnish little of added value from the point of view of the prosecution. As a result comparatively few facts compiled from actual human fatalities are available in respect to the distribution of poisons. A few organs such as the stomach, liver or kidneys are commonly subjected to analysis; but beyond this, little attention is paid to the relative content of the poison in the different parts. In fact, the materials saved at autopsy are frequently bottled up in a single container and sent to the chemist without any further thought of distinctions or differentiations. This is true despite the fact that the importance of studying the distribution of the poison in medicolegal cases has long been emphasized. Such a procedure calls for the cooperation of physician, chemist and perhaps lawyer as well; but it is likely to furnish results of practical importance with respect to knowledge of the mode of introduction of the poison; its nature, the possibility of post-mortem imbibition, of chronic versus acute intoxication, and other factors that may be of moment in establishing innocence or criminal guilt. Indeed, it has been said by a competent toxicologist that it is as much the chemist's duty to trace out the relative and absolute distribution of poison in the body of the deceased as it is to determine the nature and quantity of the poison in the stomach.

These comments apply with special force to arsenic. Although this substance no longer enjoys the distinction of being a popular poison as it did a generation ago, it is still occasionally encountered as an agent of acute intoxication in medicolegal practice. One of the foremost problems which always arise in connection with this poison is the determination of whether it was actually introduced into the body before death. Post-mortem introduction, and even cadaveric imbibition of poisons must always be kept in mind as a theoretical possibility, although the old, long-prevalent idea of the absorption of arsenic from the soil is no longer seriously considered.

Chittenden long ago[1] pointed out that the presence of arsenic in the brain, even if it be only in traces, is an indication amounting almost to proof positive of the ante-mortem character of the poison. Numerous facts lend their aid in arriving at a conclusion on this point. By no ordinary measures, such as those to which criminals would be likely to resort, could arsenic be introduced into the body after death and be carried by the ordinary processes of diffusion to a point so remote from the central portions of the body. Extensive migration of arsenic may be stopped by its fixation by conversion into an insoluble sulphid, and the unusual distribution would add a further clue as to the unphysiologic introduction. The absence of arsenic in the brain, on the other hand, in no wise proves that the poison was not taken prior to death.

Professor Ekeley of the University of Colorado has had an opportunity to investigate the organs of a person known to have died from arsenical poisoning. The findings which he has just placed on record[2] show that by far the greater part of the arsenic was taken up by the liver and kidneys. Only a trace found its way into the spinal cord, but the brain contained a small amount. The facts here reported are of peculiar value because the material was all obtained in good condition from a cadaver of known history, and they confirm the important contention of Chittenden cited above.

One still finds mention, in the text-books, of the antiquated belief that the bodies of persons poisoned with arsenic remain undecomposed a remarkably long time and may tend to become mummified.[3] In other words, these cadavers are said to desiccate rather than decompose. This alleged occurrence has been proposed as evidence of arsenical poisoning. It is certain, however, that mummification can occur in the absence of any arsenical factor; and Ekeley's record makes it equally certain, if further proof were needed, that cadavers from undoubted cases of arsenical poisoning may early show an advanced state of moist decomposition. As added evidence of what the elements working in the ground can do it is interesting to note Ekeley's finding that the soil which had been very near to the casket showed marked traces of arsenic, while that a little removed was almost arsenic-free.

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[1] Chittenden, R. H.: The Distribution of Arsenic in a Human Body, Am. Chem. Jour., 1883, v, 1; The Significance of the Absorption and Elimination of Poisons in Medicolegal Cases, Medicolegal Jour., 1884.

[2] Ekeley, J. B.: The Distribution of Ante-Mortem Administered Arsenic in the Human Cadaver, Jour. Am. Chem. Soc., 1913, xxxv, 483.

[3] Compare Kunkel, A. J.: Handbuch der Toxikologie, p. 267.

Current Comment

IN LINE AGAINST FAKERY

Detroit Saturday Night, a virile Michigan weekly, has joined the campaign against fakery. It has studied the field, has gathered facts about frauds at its very door, and now presents its opinions of them in a fashion that is terse, direct and sure. Using, naturally enough, and with courteous acknowledgment, THE JOURNAL'S exposés and investigations, as bases for some of its articles, the Detroit paper offers "stories" that grip the interest even of those already familiar with the facts. Its charges are neither loose and vague nor purposely generalized to evade reprisal. If any reprisal were possible, *Detroit Saturday Night* would have known it ere now; for its reports have all the explicitness that names, places, analyses and figures can ensure, and its vocabulary includes the most vigorous terms. It knows, furthermore, the meaning of a testimonial and a death certificate side by side! But the real effect does not depend merely on crisp sentences and good headlines. The paper adorns its tale, but it also points a moral. It can ask embarrassing questions. For instance: If the claims of cure-alls be true, why do not papers carrying the advertisements of these cure-alls proclaim their worth in prominent news space? If Nature's Creation can cure tuberculosis, why continue the cost of tuberculosis hospitals and antituberculosis societies? Why spend from $10 to $25 for an Oxypathor, Oxydonor or any other "Oxy," when an empty tomato can will do you just as much good? As an outlet for the interest aroused, the paper has definite suggestions in line of legislation. A challenge to the state authorities to take action against local fraud; a plea in the name of humanity for a bill against fraudulent advertising—these, with definite facts concerning actual fakes, *Detroit Saturday Night* offers as part of its share in the effort to

. . . help to save mankind
Till public wrong be crumbled into dust.

MORPHIN AND CONSTIPATION

The constipating effect of opium and morphin is a feature in the action of these drugs that has long been known to physicians, but the explanation or interpretation of its occurrence has not been so apparent. Undoubtedly, as so often happens when conflicting experiences and puzzling situations are involved, there is more than one factor at work to explain the ultimate phenomenon. The experiments of Magnus in particular have shown that a prominent feature in the action of morphin on the gastro-intestinal tract consists in the marked retardation of the discharge of contents from the stomach. As a result, the passage of food into the intestine is decidedly delayed, and consequently the ordinary stimuli for peristaltic activity in the intestine are decreased. The temporary inhibition of the secretion of the fluids pouring into the alimentary tract has also been reported. Despite the unquestionable importance of such retardations in leading to constipation, they scarcely seem adequate to explain entirely the familiar facts of clinical experience. The question is accordingly raised whether the opium products do not exercise some direct sedative influence on the lower bowel itself. It has been maintained by Padtberg, for example, that the vigorous peristalsis of the small and large intestine induced by colocynth can be checked by morphin. But even these suggestions of influences exerted on the lower bowel in addition to the undoubted effects on the stomach can scarcely account for the clinically recognized manifestations of constipation induced by the use of the opium alkaloids. Some other pharmacologic influence must be at work; accordingly it has been suggested that a diminution, or even occasional disappearance, of the reflexes of defecation[1] is brought about. This idea is supported by the observations, easily made on human subjects, that even when the feces are of semisolid consistency, and presumable occasion for their discharge manifests itself, the final act of defecation may be delayed for hours through the action of opium. The constipative manifestations of this drug are thus at length referred in some way to the very end of the gastro-intestinal apparatus.

IN THE OPEN AT LAST

A bill has been introduced into the Illinois legislature by Mr. Hurburgh to regulate objectionable advertising. It is aimed specifically at the "lost-manhood" type of advertisement and makes such advertising a misdemeanor for which both the advertiser and the publisher may be punished. The bill has been favorably commented on by the decent newspapers of the state and has just passed the senate by a vote of 35 to 6. It is opposed, of course, by the quacks and those whose interests lie in that direction. Here is a circular letter sent out by a company that owes its fortune to careless and uncritical members of the medical profession. It is being sent to the druggists of the state of Illinois and deserves a careful reading:

> We respectfully call your attention to Illinois S. B. No. 481 by Mr. Hurburgh designed to stop the advertising and sale in Illinois of a large number of valuable remedies for the treatment of certain diseases. This Bill, *introduced by the doctors,* is occasioned by the fact that *the advertised remedies are equally as successful as the doctors in the treatment of the diseases named* and at infinitely less cost to the patient; thus depriving the doctors of what they consider their perquisites. There is no demand by the people for this legislation and it is only an entering wedge for *the doctor, who claims a monopoly of all healing* and would, if he could prevent the sale of all medicines except on a prescription furnished by him.
>
> This bill does not affect us, as we do not manufacture and have no interest in such remedies but we believe it should be opposed because it offers a precedent for worse legislation along the same lines.
>
> Trusting that you will write your Senators and Representatives at once, asking them to vote against legislation of this nature which will benefit only one class of individuals at the expense of the whole people, we remain
>
> Sincerely yours,
> THE ANTIKAMNIA CHEMICAL COMPANY.

We have italicized certain portions of this letter for the purpose of emphasizing the present attitude of the Antikamnia Chemical Company. This company, as we have already said, is an expensive monument to the poor judgment of the medical profession and to the venality of a portion of the medical press. For a good many years, a certain proportion of the profession has not been able to satisfy itself that the Antikamnia Chemical Company was not only antagonistic to the ideals of medicine but also antagonistic to the profession itself. The letter we have just given should be sufficient to convince even the most charitable. By it the company places itself squarely on record, and by lining itself up with the "lost-manhood" quacks, it admits every allegation The Journal has made regarding it for the past ten years.

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[1] See Shapiro, N.: Ueber die Wirkung von Morphium, Opium und Pantopon auf die Bewegungen des Magen-Darm-Tractus des Menschen und des Tieres, Arch. f. d. ges. Physiol., 1913, cli, 65.

LAZARUS AND DIVES

Despite much that has been said and written to the contrary, health conditions in American cities, as elsewhere in civilization, are improving, if diminished death-rates are a criterion. And yet health conditions in our great cities are not good enough to satisfy the humanitarian — at any rate those conditions which accompany or follow the gravest social and economic diseases of the body politic. At a recent woman's industrial exhibition were placards showing disease-engendering conditions: obviously insanitary sweat-shops, in which consumptives work on underwear, shirtwaists, bed- and table-linen, lace collars and other garments, to be sold on the bargain counter, and to be introduced with all their germ-content into other homes. A placard bore a doctor's statement: "I have found 182 families, 179 with contagious disease, doing this tenement work." Nicely bottled pecans are sold as titbits for the well-to-do; in this exhibition were photographs of a mother and two children in a squalid room cracking the nuts, one of the children facilitating the work by using its teeth. By such poor women and little children also (often illegally kept from school) are bristles put into hair-brushes, artificial flowers made and paper cigarette tubes rolled — and licked. One of the most melancholy aspects of our civilization is the pay for sweat-shop work: $1 a dozen for skilled work at gloves for which the retailer charges $3 a pair; 30 cents for four hours' crocheting of a hand-bag which sells for $1.50. In 204 inspected homes, 25 per cent. of the workers were between 5 and 10 years of age; nearly half were under 14; a fourth of the children worked five hours or more a day after school; three-fourths of these home-working families earned less than 10 cents an hour altogether. In the end, however, the consumer not infrequently must pay an awful price in sickness and in death for "bargains" prepared under such pitiless and often pestilent conditions. Well indeed has Dr. Solomon Solis-Cohen observed that "the poverty of Lazarus makes itself felt in the house of Dives"; yes, and his infections also!

FRESH BREAD FORTY HOURS OLD

Bread kept under ordinary conditions rapidly becomes stale or dry, so that persons who do not fancy the staff of life in that particular physical state must have bread within a few hours after it is baked. A method of preventing bread from becoming stale would therefore be an epicurean and economic advantage; it would not only contribute to the gustatory requirements of the fastidious, but also prevent considerable loss to the baker and the consumer. Dr. J. R. Katz[1] of the University of Amsterdam is said to have stated that bread kept at either a low or a high temperature is preserved fresh for some days at least. In his experiment bread was kept absolutely fresh for more than forty hours at a temperature of 140 F. (60 C.). At a temperature of from 86 to 104 F. (30 to 40 C.), it became only half stale, and became fresh again at a temperature below freezing. Dr. Katz therefore recommends that bread be kept at a temperature of 122 F. (50 C.) and upward, which will keep the crumb fresh, while the crust will become soft by the absorption of moisture. If the bread is put back into the oven for a short time the water will be driven off from the crust and the bread will become crisp again. The bread may also be kept in cold-storage rooms at sufficiently low temperatures, when if the air is sufficiently dry the crust will remain hard and crisp, so that it will retain all the characteristics of new bread for a considerable time.

CORRESPONDENCE SCHOOLS FOR NURSES

The idea of correspondence school instruction has had remarkable growth in recent years. For certain subjects, such as history and literature, it may be adequate, although even here it numbers among its disadvantages lack of the stimulus that comes from personal contact with the instructor and class. There are other branches, however, which can never be really taught by correspondence. Nursing, emphatically, is one of these. This is an age of practical methods, and there is no subject to which such methods should be more strictly applied than to that of nursing. A certain amount of theoretical knowledge can be gained from the text-book, such as the location of the different organs of the body and the names and uses of certain drugs — an exceedingly small part of a nurse's training. No one can learn to be a nurse by reading text-books or lesson sheets, or by hearing descriptions of methods of handling cases. The nurse must learn to recognize conditions by seeing them, to differentiate among symptoms by comparing them and to do by doing — all this not once but many times. Many of the young women who plan to become nurses do not know these facts. They are led by the alluring advertisements in journals and magazines to take the course which promises to lead easily and cheaply to the desired end. They will be disappointed when they discover, after the completion of their courses with these correspondence schools, that they cannot register their diplomas, that they are not competent to act as nurses, that they will not have the standing of those practically trained, and that the physicians of standing in their communities will refuse to employ or recommend them. And yet the number of correspondence schools for nursing is increasing and the quality decreasing. The methods of some, perhaps, may be regarded as honorable, but there are few of these. The other kind is multiplying. The methods of one — the Rhode Island College of Nursing — we discussed in a recent issue.[2] Since then physicians who have been consulted by those desiring to take up nursing have written us concerning the National College of Nursing of Elmira, N. Y. This concern seems to have peculiarities of its own. It plans to make use of physicians as an advertising medium, and will do this by appointing physicians as "consultants and medical examiners." The circular letter to doctors says: "For each applicant examined by you and accepted by the school, we shall send you, from the first remittance received, a check for $5 as compensation for your examination or advice. If the applicant originates with you, we shall send you $10." There are other evidences which will compel even the most charitable to believe that such an institution is not conducted in accordance with the highest ideals. It is the duty of physicians to discourage those who contemplate taking a correspondence course in nursing. In the end women so taught will be a disappointment to themselves, an irritation to physicians and a danger to the public.

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[1] Scientific American, May 10, 1913.

[2] The Doctor Again Picked Out for an Easy Mark, Current Comment, The Journal A. M. A., Feb. 22, 1913, p. 600.

NEWSPAPERS AND SUICIDE

A few days ago a Mr. Walker of Macon, Ga., mistaking it for a headache tablet, swallowed an antiseptic tablet containing 7 grains of bichlorid of mercury. The newspaper announcements said that he vomited soon afterward, and that his stomach was washed out. Hence the probability is that the man retained barely a fatal dose, and therefore lived longer than he would have lived had the full amount of mercury taken been retained. This case was not an unusual one. Although such accidents have occurred many times, this case was "featured" by the newspapers of the country day after day, and the idea conveyed that Mr. Walker was having a good time although knowing that he was going to die. Of course the "stories" were embellished to make good reading. As might have been expected, the suggestion has had its effect on despondent waverers, and suicides by this method are now being reported; in fact, before Mr. Walker had died a Chicago paper announced one. It is a pity that the sense of responsibility to the public is so little developed in the editors (or those responsible for the policy) of such papers as those that "featured" the Walker accident. One of our most prominent dailies recently published a cartoon ridiculing the federal senate "pure news bill" designed to prevent the publication of unwholesome news. The sensational press is doing its best to hasten the day of such legislation.

THE LAY PRESS CORRECTLY CLASSIFIES FRIEDMANN

A poll of the press on the Friedmann commercialism is decidedly reassuring. There were not a few newspapers which, just after Friedmann arrived, criticized the physicians and the state laws for not freely granting him a license to practice, but the conservative course of conduct has been fully vindicated. Friedmann is now classified almost with unanimity as having fallen from grace. The Topeka (Kan.) *Capitol* calls the Friedmann deal "a surprising error in judgment." "While he may be a benefactor of humanity," says the St. Paul (Minn.) *Pioneer Press*, "he is primarily a benefactor of himself." "Friedmann has shown himself possessed of high commercial ability," remarks the New York *Call*. "He saw his opportunity, took it, and it is probable that he has got away with the money. The real worth of his discovery is important only to consumptives—and in mercantile affairs they do not count for anything except as consumers. And in this case, as in others, let the buyer beware." The Peoria (Ill.) *Star* says that "the general opinion is that Dr. Friedmann is a humbug." "Deplorable," exclaims the Pittsburgh (Pa.) *Press*. The Baltimore *Sun* comments on his "cold-bloodedness" and "willingness to make humanity a mere matter of traffic," while the Holland (Mich.) *Sentinel* wonders if Friedmann "is to end up as a patent-medicine man" and declares that "he has vindicated the skepticism of the ethical profession" and "has perpetrated a cruel hoax on the American public." Unkindest cut of all, the Scranton (Pa.) *Republican* recommends the issuance of a "fraud order directing the holding up of mail devoted to his business." We think that the average newspaper editor has sized the matter up very clearly.

Medical News

FLORIDA

New State Association Officers.—The fortieth annual meeting of the Florida Medical Association was held in Miami, May 13-15, and the following officers were elected: president, Dr. P. C. Perry, Jacksonville; vice-presidents, Drs. John G. Du Puis, Lemon City, J. C. Davis, Jr., Quincy, and W. S. Gramling, Miami; secretary-treasurer, Dr. J. D. Fernandez, Jacksonville (reelected), and librarian, Dr. W. S. Manning, Jacksonville. Orlando was selected as the place of meeting for next year.

ILLINOIS

New Officers.—Henry County Medical Society in Kewanee, May 8: president, Dr. J. A. Gustafson, Orion; secretary-treasurer, Dr. G. H. Hoffman, Kewanee.

Biology Building to be Erected.—A fund of $100,000 is to be secured for the erection of a building at Rockford College in commemoration of Clara Barton, and for the endowment of a scholarship of biology and bacteriology in that institution.

New Officers.—Mercer County Medical Society at Aledo, May 13: president, Dr. R. H. Smith, Seaton; secretary-treasurer, Dr. A. N. Mackey, Aledo.——Grundy County Medical Association at Morris, May 13: president, Dr. C. D. Allison, South Wilmington.

Award Made to Physician.—In the case of Dr. R. M. Curtis, Marengo, against McHenry County, in which a sum in excess of $5,000 was claimed on account of service during a small-pox epidemic, the jury found in favor of the plaintiff, awarding him $1,500 for his services.

Buys Site for Sanatorium.—Dr. George W. Michell has purchased 100 acres of land at Prospect Heights, Peoria, from Dr. George A. Zeller, as a site for the new building of the Peoria Sanitarium. The new institution is to cost $50,000 and will be arranged on the cottage system.

Hospital Notes.—A tuberculosis sanatorium for La Salle County is to be erected on the county farm at a cost of $2,400.——The site for the municipal sanatorium for Rock Island has been abandoned on account of the opposition of the residents.——The new St. Joseph's Hospital, Aurora, was dedicated with impressive ceremonies, May 25. Bishop Muldoon of Rockford made the dedicatory address.

Chicago

Hospital Dedicated.—The Sarah Morris Hospital for Children at Twenty-Ninth Street and Groveland Avenue, made possible by a bequest of $300,000 by Mrs. Sarah Morris, was dedicated May 25. A public reception was held between 2 and 6 p. m. The hospital has 125 beds for the care of sick children, and, while primarily a free hospital, has accommodation for a limited number of pay patients.

Personal.—Dr. and Mrs. Thomas J. O'Malley, Dr. and Mrs. A. E. Lundgren and Dr. and Mrs. George de Tarnowsky have sailed for Europe.——Dr. Mortimer Frank has returned from Europe.——Dr. Julius Grinker has been appointed a member of the attending staff of Cook County Hospital in the department of nervous and mental diseases.——Dr. C. W. Imwall has been elected surgeon of the West Side Hospital.

INDIANA

New Officers.—Eighth District Medical Society at Muncie, May 8: president, Dr. U. G. Poland, Muncie; secretary-treasurer, Dr. Fred McK. Ruby, Union City.——Lagrange County Medical Socie[illegible]: president, Dr. William H. Short, Lagrange; [illegible]lfred A. Wade, Howe.

The Work Against Tuberculosis.—At a meeting of the Fort Wayne Antituberculosis Society, May 3, Drs. George W. Gillie, E. M. Van Buskirk, Eric A. Crull and C. G. Beall were appointed a committee to formulate plans for the establishment of a tuberculosis camp on ground donated by the Allen County Board of Commissioners. The colony will be able to accommodate twenty patients.——The Elkhart County Antituberculosis Society at its recent meeting in Elkhart, decided to erect four cottages, two in Elkhart and two in Goshen, for tuberculosis patients. The cottages will be erected on the standard plans adopted by the State Society.——The new hospital of the Boehne Tuberculosis Farm, Evansville, was dedicated May 18. The hospital has four wards and ten private rooms and there are at present seventeen inmates.——The Tuberculosis Crusaders of Madison County have been incorporated by Dr. Etta Charles, Summitville; S. C. Norris, Anderson, and others.

IOWA

New Officers for Woman's Medical Society.—At the sixteenth annual meeting of the State Society of Iowa Medical Women, held in Des Moines, May 6, Dr. Florence Sherbon, Colfax, was elected president; Dr. Jeanette F. Throckmorton, Chariton, first vice-president; Dr. G. T. Dulin, Sigourney, second vice president; Dr. Clara B. Whitmore, Cedar Rapids, secretary, and Dr. Grace F. H. Jerger, Waterloo, treasurer.

State Society Meeting.—At the sixty-second annual meeting of the Iowa State Medical Society held in Des Moines, May 7-9, the following officers were elected: president, Dr. Lee Wallace Dean, Iowa City; vice-president, Dr. S. A. Spilman, Ottumwa; delegate to the American Medical Association, Dr. J. C. Rockafellow, Des Moines; alternate, Dr. C. S. James, Centerville; trustee, Dr. G. N. Ryan, Des Moines; councilor, fifth district, Dr. G. E. Crawford, Cedar Rapids, and sixth district, Dr. H. C. Eschbach, Albia. Sioux City was chosen as the next place of meeting.

MARYLAND

Baltimore

Lecture on Plague.—Dr. C. W. Young, professor of pathology and bacteriology in the Peking China Union Medical College, lectured on the plague epidemic in Manchuria, May 18.

Osler Translated into Chinese.—Dr. Francis J. Hall, a member of the faculty of the Peking China Union Medical College, is preparing for publication the second Chinese edition of Osler's "Practice of Medicine."

Brady Urologic Clinic.—Plans of the James Buchanan Brady Urologic Clinic at Johns Hopkins Hospital call for a five-story brick building, accommodating sixty patients. It will be situated on the Monument Street site, next to the surgical building.

New Building for Hospital.—Ground will be broken July 1, on a lot adjoining the old South Baltimore Eye, Ear, Nose and Throat Hospital for the new building which will be fire proof, three stories and a basement in height, 63 by 83 feet, with a roof garden.

Memorial to Billings.—The Johns Hopkins Hospital Medical Club held a special meeting in memory of the late Dr. John S. Billings, May 26, at which addresses were made by Dr. William H. Welch, William S. Halstead and Winford Smith.

MASSACHUSETTS

Personal.—Dr. Walter E. Fernald, superintendent of the State School for Feeble-Minded, Waverly, has been appointed head of the legislative commission to investigate the white-slave traffic.——Dr. L. G. Mead, Watertown, has been appointed contract surgeon at the Watertown Arsenal.

Summer Graduate Course at Harvard.—A summer graduate course in medicine at Harvard Medical School will begin June 1, extending to September 30. The monthly announcement shows that five hundred different courses, including almost every branch in the medical curriculum, are offered.

New Officers.—Bristol South District Medical Society at New Bedford; secretary-treasurer, Dr. A. B. Cushman, South Dartmouth; secretary-treasurer, Dr. A. J. Abbe, Fall River.——Franklin District Medical Society at Shelburne Falls, May 13: president, Dr. C. F. Canedy, Shelburne Falls; secretary-treasurer, Dr. Webster K. Clark, Greenfield.

Hospital News.—The Methodist Episcopal Church is planning to purchase the Attleboro Sanatorium. Subscriptions amounting to $35,000 have already been made and an active campaign is being carried on to secure the $81,000 additional required to complete the purchase.——The new Board of Health Hospital for Isolation Cases. The institution will be able to accommodate twenty-six patients.

MISSOURI

Sanatorium Site Offered.—The Missouri Society for the Relief and Prevention of Tuberculosis has received an offer of forty acres of land in St. Louis County as a site for a sanatorium for children suffering from tuberculosis of the bones.

New Officers.—Linton District Medical Society at Mexico, May 6: president, Dr. J. Frank Harrison; secretary, Dr. Harry W. Gibbs, both of Mexico.——South West Missouri Medical Society at Springfield, May 8-9: president, Dr. A. H. Madry, Aurora; secretary, Dr. H. S. Hill, Springfield (reelected).——Jackson County Medical Society, eye, ear, nose and throat section, at Kansas City, May 8: chairman, Dr. Hal Foster; secretary, Dr. R. J. Curdy, both of Kansas City.

Sanatorium Board Meets.—The board of managers of the Missouri State Sanatorium for Tuberculosis, Mount Vernon, met May 10 and elected Dr. J. L. Eaton, Bismarck, president; Dr. C. T. Dusenbury, Monett, secretary; Dr. E. W. Schauffler, Kansas City, medical director; Dr. B. Hughes, Keytesville, superintendent and Dr. C. C. English, Mount Vernon, assistant superintendent. The board decided to begin at once the erection of the new building for which $35,000 was appropriated by the last legislature.

Personal.—Dr. C. L. Woolsey, Braymer, has been appointed assistant physician at State Hospital No. 2, St. Joseph.——Dr. John Stewart, formerly superintendent of the Missouri State Sanatorium for Tuberculosis, Mount Vernon, has accepted the superintendency of the Arkansas State Sanatorium for Incipient Tuberculosis, Booneville.——Dr. B. W. Harris, Georgetown, is reported to be critically ill with uremia.——Dr. E. E. Evans, Columbia, has been appointed superintendent at State Hospital No. 3, Fulton, vice Dr. D. E. Singleton, Fulton, who will locate in Keytesville.——Dr. George A. Still, Kirksville, sailed for Europe, May 1.

MONTANA

Personal.—Dr. Edward F. Maginn, Butte, has been appointed a member of the State Board of Health, vice Dr. C. T. Pigot, Roundup, and Dr. Daniel J. Donohue, Glendive, has been reappointed a member.——Dr. James P. Aylen, Missoula, has been appointed general surgeon for the Northern Pacific system.

New State Association Officers.—At the thirty-fifth annual meeting of the Montana State Medical Association held in Great Falls, May 14-15, the following officers were elected: president, Dr. W. P. Mills, Missoula; vice-presidents, Drs. J. H. Irwin, Great Falls, E. G. Balsam, Billings, and S. A. Cooney, Helena; secretary, Dr. Herbert D. Kistler, Butte (reelected); treasurer, Dr. C. C. Wallin, Lewistown, and delegate to the American Medical Association, Dr. LeRoy Southmayd, Great Falls. Lewistown was selected as the place of meeting for 1914.

NEBRASKA

New Officers.—Buffalo County Medical Society at Kearney May 3: president, Dr. H. S. Bell; secretary-treasurer, Dr. J. S Blanchard.

Bridges in Charge.—Dr. W. O. Bridges, dean of the Omaha Medical College, will hereafter have full charge of the institution in Omaha. Dean R. H. Wolcott will remain in Lincoln where he will have charge of the junior medical classes.

NEW HAMPSHIRE

State Society Meeting.—At the twenty-second annual meeting of the New Hampshire Medical Society held in Concord, May 13-14, the following officers were elected: president, Dr. Abram W. Mitchell, Epping; vice-president, Dr. H. K. Faulkner, Keene; treasurer, Dr. Charles R. Walker, Concord, and delegate to the American Medical Association, Dr. Irving A. Watson, Concord.

NEW JERSEY

Reunion at State Society Meeting.—There will be a reunion of graduates of the University of Pennsylvania at the new Hotel Monmouth, Spring Lake, June 10, on the occasion of the annual meeting of the Medical Society of New Jersey. Dr. Alexander McAlister, Camden, is president and Dr. Hyman I. Goldstein, Camden, secretary of the committee of arrangements.

Personal.—Dr. William J. Burd, Belvidere, is reported to be seriously ill from the effects of an overdose of antitetanic serum.——Dr. Vittorio Risicato, Morristown, fractured his skull in an automobile accident in Albany, May 9.——Dr. A. Jones, assistant physician at the New Jersey State Hospital for the Insane, Trenton, has resigned to accept a similar position at Bay View, Baltimore.——Dr. G. H. Balleray, Paterson, was the guest of honor at a dinner tendered by members of the Passaic County Medical Society, May 14.

NEW YORK

Typhus on Long Island.—A case of typhus is reported at East Hampton, L. I., and the surgeon-general of the U. S. Public Health Service has been notified.

Tuberculosis Hospital Nearly Ready.—The Montgomery County Tuberculosis Hospital now being erected on the Hobbs Farm, just east of Amsterdam, will be ready for occupancy by the first of July.

Urge Tuberculosis Hospital.—The physicians of Rockland County are urging the necessity of a tuberculosis hospital for that county and have sent a petition to the board of supervisors recommending the erection of such a hospital and setting forth the need of such an institution in that county.

New Officers.—Albany County Medical Society at Albany, May 14: president, Dr. James F. Rooney; secretary, Dr. Frederick C. Conway, both of Albany.——Steuben County Medical Society, ninety-eighth annual meeting at Bath, May 13: president, Dr. Douglas H. Smith, Bath; secretary-treasurer, Dr. B. R. Wakemann, Hornell.

Personal.—Dr. James A. Hawley, Canandaigua, has retired after more than half a century of active practice.——Dr. Roswell Park, Buffalo, has returned from a visit to the Canal Zone.——Dr. Montgomery E. Leary has been placed in charge of the hospital and ambulance corps to be maintained during the Elks' Convention in Rochester.——Dr. Walter M. Litchfield, Salamanca, was seriously injured in a collision between his automobile and another car, near Elkdale, May 8.

New York City

New Officers.—Flatbush Medical Society, May 9: president, Dr. Thomas B. Hegeman; treasurer, Dr. Morris W. Henry, both of Brooklyn.

Half Million Wanted for Academy.—A circular pamphlet has been issued by the New York Academy of Medicine setting forth the need of a new building for that body and appealing to the public to make it possible. The fellows of the Academy have pledged $124,000 toward the purchase, and the academy's equity in its real estate is valued at $376,000.

For New Orthopedic Hospital.—The New York Orthopedic Dispensary and Hospital has bought a site having a frontage of 145.11 feet on East Fifty-Eighth Street and of 87.11 feet on Fifty-Ninth Street on which it proposes to erect a new building. All property leases have been cancelled so that building operations may be begun at once.

Chapel for Tuberculosis Patients.—The Chapel of the Sacred Heart, in connection with the Antituberculosis Sanatorium on Blackwells Island, was dedicated by Cardinal Farley, May 18. The edifice has antiseptic provisions. Gauze curtains, hung in the confessionals, are to be changed every hour when confessions are held. The chapel has been erected at a cost of $75,000——The formal opening of new clinics of the Long Island Hospital took place at the Polhemus Memorial Clinic, May 20.

Memorial Service.—The annual memorial service for deceased members of the Medical Society of the County of Kings, was held in the Library Building, Brooklyn, May 18. The deceased members whose memory was honored were: Drs. Victor Seymour Pier, Herbert Cooper Rogers, William Frederick Dudley, William Frederick Rex, Edward Leroy Oatman, Robert Bradlee Welton, Keran O'Brien, Ernest Palmer, William Foster Ganster, Philip Hanson Hiss, Jr., John Davies Trezise, Algernon Thomas Bristow, Frank Little, James Tabor Burdick, John Wright Ostrander, Thomas Wilson Topham, Isaac Hull Platt, Henry George Small, William James Callan, William Arthur Little, Eugene Joseph Carolan, John Herman Droge and James Lester Carney.

Another Organization to Fight Cancer.—To start a campaign of publicity against cancer, delegates from various associations, the American Dermatological Association, the American Laryngological Association, the American Otological Association, the American Gynecological Society, etc., met recently at the Harvard Club and elected the following officers: president, George C. Clark, New York City; vice-presidents, Dr. Clement Cleveland, New York City; Dr. Lewis S. McMurtry, Louisville, Ky.; Dr. Edward Reynolds, Boston; Dr. Edward Martin, Philadelphia; Dr. Lewellys F. Barker, Baltimore; secretary, Thomas M. Debevoise, New York City. Other societies interested in cancer problems will be asked to take part in the campaign. The plan of the organization is to enlighten American women on cancer by articles in women's magazines and journals of nursing, by pamphlets distributed by nurses, social workers, physicians and women's clubs, by instruction in nurses' training schools and by lectures before women's clubs. This new organization seems therefore to cover the same ground as other preexisting bodies, in the formation of which some of the same delegates and associations have cooperated. A movement is already on foot to correlate or amalgamate all these bodies into one effective National Anti-Cancer League.

NORTH CAROLINA

Personal.—Dr. T. F. Reynolds has been elected mayor of Canton.——Dr. Charles T. Nesbitt, Wilmington, has been elected chief of the combined city and county health departments.——Fire on April 28 destroyed a building in Newbern owned by Dr. Frank Hughes, with a loss estimated at $10,000.——Dr. L. J. Picot, formerly superintendent of the Raleigh State Hospital, will resume practice in Littleton.

NORTH DAKOTA

State Tuberculosis Sanatorium.—The State Board of Control of Penal and Charitable Institutions has recently inspected the State Tuberculosis Farm, Dunseith, which is almost ready to be turned over to the state. The sanatorium is ideally located and everything in excellent condition. Dr. John G. Lamont is superintendent of the institution.

State Association Meeting.—The twenty-sixth annual meeting of the North Dakota State Medical Association was held in Minot, May 7-8, and the following officers were elected: president, Dr. Murdock MacGregor, Fargo; vice-presidents, Drs. R. H. Beek, Lakota, Victor Hugo Stickney, Minot; secretary, Dr. H. J. Rowe, Casselton (reelected); treasurer, Dr. C. S. Crane, Grand Forks; councilors, Drs. L. B. Greene, Monango, G. F. Drew, Devils Lake, J. T. Newlove, Minot, and J. E. Countryman, Grafton; delegate to the American Medical Association, Dr. James Grassick, Grand Forks, and alternate, Dr. Blake M. Lancaster, Crosby.

OHIO

New Officers.—Morrow County Medical Society at Mount Gilead, May 14: president, Dr. W. L. Case; secretary, Dr. T. P. Johnston, both of Mount Gilead.

Fund for German Hospital.—The cash receipts for the General Hospital, Cleveland, thus far amount to more than $38,000. The executive committee has purchased the property of the Home of the Friendless for $19,000, and the erection of a new building for nurses is to be commenced very soon.

Personal.—Dr. R. H. Bishop, Jr., chief of the tuberculosis bureau of the Cleveland Health Department and secretary of the local Antituberculosis League, has been appointed superintendent of the new Municipal Tuberculosis Sanatorium, Warrensville.——Dr. John R. Johnson, Lima, has succeeded Dr. J. W. Costolo as superintendent of the District Tuberculosis Sanatorium, Lima.——Dr. Frank Oakley, Cleveland, is studying in Berlin.

University Accepts Medical School.—An authentic report states that the Ohio State University has accepted the offer of the Starling-Ohio Medical College, making the latter an integral part of the university as its medical department. The present organization of the medical school will be continued, however, during the present year. By this merger the Protestant and St. Francis hospitals will be under the general supervision of the university.

Cincinnati

Gifts to Medical College.—Mrs. Mary Emery has contributed $125,000 to the Ohio-Miami Medical College of the University of Cincinnati for the endowment of a chair of pathology. A sum of about $80,000 from the estate of Dr. Francis Brunning has also been received by the university, the income of which will be used for the endowment of a second chair.

OKLAHOMA

New Officers for State Association.—The Oklahoma State Medical Association held its annual meeting in Enid, May 13-15, and elected the following officers: president, Dr. J. M. Byrum, Shawnee; vice-presidents, Drs. LeRoy Long, McAlester, J. T. Slover, Sulphur, and J. H. Barnes, Enid; secretary, Dr. Claude A. Thompson, Muskogee (reelected), and delegate to the American Medical Association, Dr. W. E. Wright, Tulsa. Guthrie was selected as the next place of meeting.

PENNSYLVANIA

Hospital Notes.—A permit has been issued for the new addition to the Hamot Hospital, Erie, six stories, 45 by 144 feet, fire-proof and costing $158,000.

Honor Venerable Physician.—The Susquehanna County Medical Society in connection with its meeting at Montrose, May 6, gave a banquet, commemorative of the ninetieth birthday anniversary of Dr. Calvin C. Halsey, Montrose.

Insanity Experts Meet.—The semi-annual convention of the Association of Trustees and Superintendents of the Insane and Feeble-Minded of Pennsylvania, of which Dr. J. M. Murdock, the superintendent at Polk, is president, met at the Rittersville Hospital, May 22. A symposium on maniac depressive insanity was held and addresses were made by the following men: Drs. C. R. McKinnis of Norristown; H. Mitchell, superintendent at Warren; Owen Copp and J. Allen Jackson, of the Pennsylvania Hospital for the Insane at Philadelphia; H. B. Meredith, superintendent at Danville, and Henry W. Klopp, superintendent at Rittersville. Afterward the visitors were the guest of the board of trustees of Rittersville.

Women Demand Clean Food.—The women's clubs of Landowne have notified storekeepers that they must have clean shops and must protect food from dirt and flies. The Civic Club of Merion and the club at Swarthmore are preparing for similar crusades. At Landowne, the work has been going on for the last two years, the first agitation being made against the bakers and dealers, forcing them to deliver bread in waxed paper. Committees were formed in the various clubs and visits made to the sources of the town's food supply and 90 per cent. of the shops were found to make no provision against flies and dirt. Shops were even cleaned without covering food in any way.

Personal.—Dr. P. J. Eaton, Pittsburgh, was elected president of the Associated Harvard Clubs, May 24.——Dr. S. P. Mengel, Parsons, has been appointed a member of the Wilkes-Barre Hospital staff, vice Dr. Alexander Gray Fell, deceased.——Dr. James T. Williams has been appointed associate surgeon on the staff of the Wilkes-Barre City Hospital.——Dr. Nathaniel Ross, Wilkes-Barre, has been elected grand commander of the Knights of Malta of Pennsylvania.——Dr. Hugh Baker, Connellsville, who has been seriously ill with septicemia, due to an operation wound, is reported improving.——Drs. E. B. Edie, H. C. Hoffman and E. C. Sherrick have been appointed members of the staff of the Cottage State Hospital, Connellsville.——Dr. Harold L. Foss has been appointed surgeon in chief of the George F. Geisinger Memorial Hospital, Danville.

To Bar New Insane Patients from Blockley.—Acting on the advice of City Solicitor Ryan, Dr. Joseph S. Neff, director of Public Health and Charities, announced on May 12, that no additional indigent insane patients will be received at the Philadelphia General Hospital, which is overcrowded, but that they will be committed to the Norristown State Hospital. This is the first step in the direction of forcing the state to assume its duties in providing for the insane. The lunacy committee has a rule that transfers to Norristown cannot be made without the consent of two members of that committee. City Solicitor Ryan declares that the rule is invalid as it applies to the director of the department of health and charities, since the act of May 8, 1883, provides that the rules of the lunacy committee shall not be inconsistent with the acts of assembly. Section 10 of the act of 1876 gives the guardians of the poor complete authority to commit patients to Norristown. On May 21, six insane patients were sent to the Norristown Insane Asylum, under commitments signed by Dr. Neff of the department of public health and charities. It was the first time that the director had exercised the power of commitment since obtaining the advice from City Solicitor Ryan. The asylum authorities recognized the validity of the commitment.

Philadelphia

Personal.—Dr. C. N. Sturtevant was exonerated May 20, by a coroner's jury, of blame for causing the death of a small boy, run down by his automobile on May 15.

Physicians' Outing.—The first annual outing and shad dinner of the South Branch of the Philadelphia County Medical Society was held at Essington, May 23. Following the dinner, which was served in a pavilion overlooking the Delaware, an address was made by Dr. Hobart A. Hare.

Phipps Institute Sold.—On May 21, Jefferson Medical College took title to the properties 236-8 Pine Street, occupied for several years by the Phipps Institute. They will be utilized as a ward for the treatment of tuberculosis; this new department is to be under the supervision of Dr. Thomas McCrae.

Gift for Research Fellowship in Medicine.—At the monthly meeting of the board of trustees of the University of Pennsylvania, May 12, announcement was made of a gift of $10,000 by Stevens Heckscher to establish a fellowship in medical research. The fellowship is to be a memorial to Mr. Heckscher's wife. The presentation was made through Dr. Alfred Stengel, professor of medicine.

St. Agnes' Silver Jubilee.—Archbishop Prendergast and prominent Catholic clergymen took part in the impressive celebration of the silver jubilee of St. Agnes' Hospital. The large chapel was magnificently decorated with flowers and the altar gleamed with lighted candles. The archbishop presided at the high mass which began at 9 a. m., May 11. The hospital's visiting staff of physicians and surgeons, resident doctors and nurses were present.

Alumnae to Meet.—The Alumnae Association of the Woman's Medical College of Pennsylvania, Philadelphia, will hold its thirty-eighth annual meeting at the college building, June 5-6, under the presidency of Dr. Eleanor C. Jones. The annual reception and dinner will be held at the Acorn Club at 7:45 p. m., June 5. It will be presided over by Dr. Kate Campbell Hurd Mead, Middletown, Conn. Business sessions will be held in the mornings and on the last afternoon; clinics are to be given on both mornings at the women's hospitals, and scientific sessions will be held mornings and afternoons.

City to Give Pasteurizing Course to Milk Dealers.—On May 26, the department of health and charities will inaugurate one of the most significant movements for the protection of the city's health, when it institutes a course of lessons in pasteurizing to be given to 125 milk dealers operating pasteurizing plants. It is the first time that the municipal laboratory has been used as a place for public demonstration and it is the first time that the Bureau of Health has put its research at the command of commercial men. The course of lectures and demonstrations will be held daily at 4 p. m. for eight days beginning May 26, at Room 715, City Hall, and invitations have been sent to more than 1,000 milk dealers.

Baby Saving Shows.—Besides the Baby Saving Show, under the auspices of the Child Hygiene Association, which is now open daily at the Nicetown Boys' Club, Hunting Park Avenue and Clarissa Street, a series of clinics, arranged by the Children's Homeopathic Hospital, are held Tuesday afternoon at the St. Stephen's Methodist Church, Germantown. Two physicians and two nurses are present to teach mothers care and feeding of babies, and a social visitor under the direction of the doctors will see that instructions are carried out. Also Gimbel Bros. have fitted up a room in their large department store, where a trained nurse instructs mothers in bathing and dressing babies.

Pennsylvania Hospital Short of Funds.—At the annual meeting of the contributors of the Pennsylvania Hospital, May 5, one of the trustees declared the institution now has a deficit of $450,000, the hospital going $50,000 behind in its running expenses during the last year. In the main this is due to improvements made to the insane department in West Philadelphia. West Philadelphia business men have formed a tentative organization, which has for one of its chief objects the removal of Kirkbride's Institution. In their annual reports, Mr. Rosengarten, trustee of the Pennsylvania Hospital and Owen Copp, superintendent of the insane department, advanced reasons why this department should not be removed. Since its organization, Kirkbride's has treated 18.000 patients, 700 of whom have been permanently cured and 4,000 helped so that they could return to their homes. During the past year, the Pennsylvania Hospital treated a total of 125,995 patients and there were 64,178 visits in the outpatient department.

VERMONT

State Board Election.—At the annual election of the State Board of Health, Dr. C. S. Caverly, Rutland, was elected president, and Dr. F. T. Kidder, Woodstock, Burlington, treasurer. Dr. C. F. Dalton, Burlington, is secretary of the board and Dr. Henry D. Holton, Brattleboro, the other member.

Mental Hygiene Conference.—A mental hygiene exhibit and conference was held in Rutland, May 19-23, under the auspices of the National Committee for Mental Hygiene. The local committee was headed by Dr. Ray E. Smith, Rutland. In addition to the exhibit, which was open for twelve hours each day, there were public meetings held on Monday evening and the afternoons and evenings of Wednesday, Thursday and Friday, at which the protection of the mental health of the public; the raising of the standard of care for those threatened with or suffering from mental disorders; the promotion of the study of mental disorders; the dissemination of knowledge concerning their causes, treatment and prevention, the securing of reliable data regarding conditions and methods of dealing with mental disorders; the enlistment of the aid of the federal government and the coordination of existing agencies and the organization of state societies for mental hygiene, were discussed.

WISCONSIN

Personal.—Dr. M. L. Henderson, Milwaukee, sailed for Europe, May 10.——Dr. J. H. Hogan has been elected president and Dr. Theodore G. Brehm, secretary of the Racine Board of Health.

Medical Building for University.—The special alumni committee on the needs of the Medical School of the University of Wisconsin has recommended the construction of a medical building to house the departments of physiology, physiologic chemistry, pharmacology, toxicology and bacteriology and the State Hygienic Laboratory, and also a student infirmary.

Society Denounces Friedmann.—The Medical Society of Milwaukee County at its semi-annual meeting May 8, endorsed by resolution the report of the committee on public policy and legislation of the society, which, after discussing the claims of Dr. Friedmann, stated that it was the consensus of opinion that Dr. Friedmann's conduct with respect to his treatment has been and still is unscientific, unethical and dishonorable. The resolutions were sent to the local newspapers and used by them.

GENERAL

Meeting of Connecticut Valley Physicians.—At the annual meeting of the Connecticut Valley Medical Association held in Bellows Falls, Vt., May 13, Dr. H. K. Faulkner, Keene, N. H., was elected president; Dr. A. I. Miller, Brattleboro, Vt., vice-president, and Dr. J. Sutcliffe Hill, Bellows Falls, secretary-treasurer.

Tuberculosis Association Secretaries' Meeting.—At the annual dinner of the National Association of Secretaries of the Associations for the Study and Prevention of Tuberculosis held in Washington, May 9, Dr. R. H. Bishop, Jr., Cleveland, was elected president and George Nelbode, New York City, secretary-treasurer.

Hygiene and Public Bath Association.—The American Association for Promoting Hygiene and Public Baths met in annual session at Baltimore, May 13-15. Dr. Simon Baruch, New York City, was reelected president, Rev. Thomas M. Bedenkoph was elected vice-president and J. Leonard Mason, Newark, N. J., secretary.

American Climatological Association.—At its annual meeting in Washington, D. C., May 6-8, this association elected the following officers: president, Dr. James M. Anders, Philadelphia; vice-presidents, Drs. Lawrason Brown, Saranac Lake, and Will Howard Swan, Rochester, N. Y.; secretary and treasurer, Dr. Guy Hinsdale, Hot Springs, Va.

Alumni at Minneapolis.—Alumni associations wishing reunions at the meeting of the American Medical Association in Minneapolis, next month, are requested to notify Dr. E. K. Green, secretary of the local committee, 307 Reid Corner, Minneapolis, in regard to any arrangements desired, and what entertainment, if any, they intend to provide.

Physicians' Study Tour of Europe.—About seventy-five physicians intend to take a study tour in Europe, according to Dr. Richard Kovacs, 256 East Sixty-Ninth Street, New York City, secretary. The party will sail July 13, and will visit Paris, Munich, Dresden, Berlin, Bad Nauheim, Vienna, Carlsbad, Marienbad, Hamburg, Wiesbaden, Cologne, Brussels and Amsterdam, reaching London in time for the opening of the International Medical Congress, August 6.

American Laryngological Association.—At its annual meeting in Washington, D. C., May 5-7, this association elected the following officers: president, Dr. Thomas Hubbard, Toledo, Ohio; vice-presidents, Drs. Frederick E. Hopkins, Springfield, Mass., and George E. Shambaugh, Chicago; secretary, Dr. Harmon Smith, New York; treasurer, Dr. J. Payson Clark, Boston; librarian, Dr. Joseph H. Bryan, Washington, D. C.; member of council, Dr. George A. Leland, Boston.

A Swindler Who Operates through the Medical Profession.—A representative of the U. S. Post Office states that a number of money order blanks have been stolen in Southern California by one A. J. Baker, who obtains physicians' stationery and forges introductions to practitioners in other towns, requesting that treatment be continued along some particular line. This is paid for by a money order, and the physician identifies Baker later, enabling Baker to cash the stolen orders. In one town Baker secured $1,400, it is said. Baker also used ministers as the means of being identified. His voice is effeminate, and when talking he holds his head to one side, with his chin slightly projecting. He is well educated and is an accomplished pianist. He is 5 feet 7 inches in height, weight 125 pounds, is 35 but appears younger, has black hair, dark eyes, and the skin of the face is rough as if slightly pitted. He dresses well, often as a woman. He is fond of presenting himself for examination, relating a long story of his life. A warrant for his arrest has been issued for robbery and forgery. If seen he should be turned over to the nearest officer and H. B. Hall, Post Office Inspector in Charge, San Francisco, should be notified by wire, government rate, collect. In the Correspondence Department of this issue is a report of a successful prosecution of another man, following a warning notice in these columns.

Infectious Diseases During May.—Infectious diseases continued to be quite prevalent throughout the country during the whole of May without epidemics of large proportions. The number of cases, however, was less than during the previous month. A new focus of cerebrospinal meningitis appeared in Richland County, South Carolina. There were only a few cases. In many cities and towns it was necessary to close the schools on account of small-pox, measles, scarlet fever, whooping-cough and diphtheria, more in the way of prophylaxis than on account of a large number of cases. Probably the most serious situation during the month developed in Canton, Mass., where an epidemic of milk-borne septic sore throat occurred. The number affected was about 400 with 19 deaths. This disease was similar to the epidemics during 1911 and 1912 in Boston, Baltimore and Chicago and spread slightly to some of the surrounding communities. On account of tardy activity on the part of the local health board, the state officials at first took charge of the situation. Prompt action soon caused a subsidence of the epidemic. Experimental prophylactic vaccination of about 3,500 persons, including a number of members of the state legislature, with an anti-meningitis vaccine in Austin, Texas, was reported on favorably by physicians connected with the State Board of Health, no cases having occurred among those vaccinated.

Osteopaths and Death Certificates in New York.—Until recently the Department of Health of New York City had a regulation that no transit permit should be granted for the removal or burial of any person who may have died in the city of New York, unless a certificate of death made out on a blank of the department was signed by a physician on whom had been conferred the degree of doctor of medicine. This excluded the osteopaths and they took steps to have this regulation modified. The Supreme Court of Kings County held that while the state had permitted the practice of osteopathy, it did not follow that one without any practice in surgery or experience in prescribing drugs was fully qualified to certify the cause of death, and that even though the theoretical education of the osteopath was of a standard sufficient to allow him to practice, his practice was restricted and that it did not appear that he could make the tests by examination of blood and tissues by which alone many diseases could be detected. It was held that the sanitary code, although discriminatory, was not personal or arbitrary but was based on a limitation which the osteopath could be said to make for himself and deprived him of no right which he ought to exercise consistent with public safety. This decision was upheld by two of the higher courts. In 1912 the osteopathic society of the city of New York again requested that osteopaths be allowed to sign death certificates and on May 6, 1913, the sanitary code was so amended as to provide that certificates of death could be "signed by a physician who had been granted a license after a medical examination conducted by the New York State Board of Medical Examiners on questions prepared by the Board of Regents of the state." This means that osteopaths who have passed the state board examinations may sign death certificates, but the number who have up to the present passed such examinations includes only about a dozen osteopaths; others will not have such right. In the state of New York, outside of New York City, under special provision in favor of osteopaths who were actively engaged in practice on May 13, 1907, and who fulfilled certain requirements, not including the regular examination of the New York state authorities, they are permitted to sign death certificates.

LONDON LETTER

(From Our Regular Correspondent)

London, May 10, 1913.

The Seventeenth International Congress of Medicine

Some further particulars may be given with regard to the forthcoming International Congress of Medicine to be held in London in August. The president of the section of medicine is Sir William Osler. The meetings of the section will be held at the Royal Society of Medicine. The work will comprise (1) discussions, (2) selected papers, (3) a clinical museum and (4) demonstrations of clinical apparatus, etc. The following discussions have been arranged: August 7, "Clinical Aspects of Hemolysis," G. Banti, Florence, and F. Widal, Paris. August 8, "Correlations of the Organs of Internal Secretions and Their Disturbances" (jointly with the section of physiology), reporters, E. Gley, Paris, A. von Koranyi, Budapest, and Frederick Kraus, Berlin; Bernard, Carnot and Claude, Paris, Biedl and Falta, Vienna; Hedon, Montpellier, Meltzer, New York, and Ferrannini, Camerino, have intimated their intention of taking part in the discussion. August 9, "Pathology of Heart Failure," reporters, H. Vaquez, Paris, and H. F. von Wenckebach, Strasburg. August 11, "Diabetes," reporters, George Dock, St. Louis, and Karl von Noorden, Vienna. August 12, "Differentiation of the Diseases Included under Chronic Arthritis," reporters, L. F. Barker, Baltimore, and Friedrich von Müller, Munich. The afternoon sittings will be devoted to the reading and discussion of independent papers. Among many promised the following may be mentioned: "Treatment of Leukemia with Benzol," A. von Koranyi; "Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax," C. Saugman; "Insuffisances pluriglandulaires," H. Claude, Paris; "Der augenblickliche Stand der Diagnosis der Pancreas- Erkrankungen," F. Wohlgemuth, Berlin; "Chronic Bacterial Endocarditis, with a Series of Preparations Illustrating the Condition from the Pathological Museum, Mount Sinai Hospital, New York," E. Libman; "The Recognition of the Status Lymphaticus in Adults," Haven Emerson, New York; "Diagnosis and Treatment of Duodenal Ulcer," Max Einhorn, New York, and "A Modified Form (?) of Sporadic Typhus, Brill's Disease," Brill, New York. Demonstrations of clinical cases of special interest will be held in connection with the morning and afternoon meetings of the section, and a strong committee has been formed to bring together the best available material for this purpose. Facilities will also be given to any member of the section who wishes to demonstrate any new clinical apparatus or clinical method.

Sir Watson Cheyne will preside over the section of surgery and Mr. Robert Jones over the subsection of orthopedics. The meetings will be held in the Imperial College of Science. The following subjects are down for discussion: "The Operative Treatment of Malignant Disease of the Large Intestine, Excluding the Rectum," introduced by Bastianelli of Rome and Körte of Berlin; a discussion, conjointly with the section of neuropathology, on the "Treatment of Tumors of the Brain and the Indications for Operation," Bruns, Hanover, Harvey Cushing, Boston, von Eiselsberg, Vienna, and Howard Tooth; a discussion on the "Diagnosis and Treatment of Early Renal and Vesical Tuberculosis," jointly with the section of urology, introduced by Legueu, Paris, Rochet, Lyons, and Wildbolz, Berne; report on the "Surgery of the Arterial System," Matas, New Orleans, and Oppel, St. Petersburg; "Intrathoracic Surgery," on the last day of the congress, Sauerbruch, Zurich, and Tuffier.

The Government Inquiry into Nostrums

At the last meeting of the parliamentary committee appointed to inquire into the sale and advertisement of proprietary medicines, Mr. Harrison, the accuracy of whose analyses in the volumes "Secret Remedies" and "More Secret Remedies," published by the British Medical Association, had been questioned by chemists representing nostrum proprietors (as reported in previous letters to The Journal), was recalled. He denied that a large proportion of his analyses referred to obscure nostrums which had very little sale. It had been stated that of 235 organic preparations in the British Pharmacopeia only 44 could be ascertained by chemical analysis. There were only 160 separate and distinct vegetable drugs in the pharmacopeia. In 84 cases the constituents could be determined by chemical or physical means or a combination of the two; in 13 cases the drugs were of little or no therapeutic activity; in 28 the drugs could not be completely identified though it might be ascertained that they were one of three or four, and in 26 the drugs would probably not be detected. In his previous evidence he had insisted on the limitations as to what an analyst could do. The analysts representing the proprietors had claimed to have found ingredients which he had not, but in almost every case they had been told of the presence of those ingredients. Moreover, samples varied; Beecham and Steedman had admitted altering their formulas. Powell's balsam and Winslow's syrup once contained morphin but did not now. Apart from deliberate alteration there were variations due to careless compounding.

Antivivisectionists Lose Suit for Libel

For some years Miss Lind-af-Hageby, a Swedish woman domiciled in England, has been the leader of the antivivisectionists, a position previously occupied by Mr. Stephen Coleridge, who frequently was involved in legal quarrels with prominent scientific men. Miss Hageby is well known as the author of "The Shambles of Science," in which vivisection is denounced in the usual lurid fashion of the antivivisectionists. She has now distinguished herself by conducting personally in the courts the longest action that has ever been brought by a woman. She claimed damages for libel against the *Pall Mall Gazette* and Dr. Saleeby, a well-known medical journalist of the popular type. Dr. Saleeby wrote in the *Gazette* about the exhibition of the antivivisection league in their shop in Picadilly, where a dog is represented as tied down to a board and undergoing torture at the hands of vivisectionists. In the article in question he referred to "the systematic campaign of falsehood without which the antivivisection societies could not exist," and cited this window as an illustration of "the unscrupulous mendacity of their hirelings." He pointed out that there was no indication given that the animal on the board was chloroformed and asked what point there would be in the exhibition if that fact were known.

Miss Lind, the plaintiff, as the honorary secretary of the antivivisection league, brought the action for libel, and not only did she conduct her own case for the twenty-three days which the trial lasted, but she made a most eloquent though unconvincing address. The long duration of the trial was partly due to the fact that the judge allowed her much more latitude than he would have allowed a lawyer. She therefore introduced much irrelevant matter. For the defendant several prominent physicians and pathologists were called to show that anesthetics were used in vivisection experiments. The judge, Mr. Justice Bucknill, in summing up told the jury that it was a question of fact and not a religious question or question of sentiment. The charges made by Dr. Saleeby were said to amount to this—that the plaintiff had untruthfully with her associates carried on a campaign against vivisection. She had undoubtedly been a hard worker in a very laudable cause; he could not help admiring the vigor with which she had fought the battle. She was a lady of marvelous power, able to stand in court day after day, showing no sign of fatigue, not losing her temper, and able to cross-examine as well as any lawyer. But it was her duty to be truthful. If they thought that Dr. Saleeby wrote facts which had been proved, then he would be entitled to the verdict. The jury returned a verdict in his favor.

The National Insurance Act

Much discontent has arisen in connection with the working of the insurance act in consequence of the enormous number of persons which some popular physicians have on their lists, many more than they can attend to properly. At present there is no limit whatever as to the number. An insured person can select any physician he likes on the panel subject to the physician's consent. On the London panel the following figures show the enormous numbers which some doctors have: Three have from 5,000 to 7,000; three from 4,000 to 5,000; twenty from 3,000 to 4,000; eighty from 2,000 to 3,000, and ninety-three from 1,500 to 2,000. Mr. Rocklif, secretary of the Joint Committee of Approved Societies, representing over seven million insured persons, has brought the matter before the London Insurance Committee. He considers that the crying necessity for a limit on the number of patients a doctor may undertake is proved by countless letters which he has received complaining of patients having to wait for hours in physicians' offices and then getting hurried, inadequate treatment. In one case the insurance committee received three certificates from the same doctor showing that the patient was suffering from a different disease each week. The examination had been so hurried that the diagnosis was altered each time. Another difficulty is in the refusal of physicians to see insured persons on Sundays. The income derived by the physician with so many patients is large; thus for 7,000 persons he receives $12,500 a year, and in addition has his private practice. It must be remembered, however, that with such a large practice the physician keeps one or more assistants. Another complaint is that physicians with these large practices frequently keep three or four lock-up offices, each of which they visit for an hour or two daily, but where it is impossible for the insured to receive attendance at any other time than the specified hours and at night.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 13, 1913.

The Proposed Revision of the Law on the Insane

The law of 1838 with regard to the insane, which is at present in force, has been for a long time the subject of violent criticism especially in the lay press. A bill revising this law has been passed by the Chamber of Deputies, and is now before the Senate. One of our most authoritative psychiatrists, Gilbert Ballet, does not believe that it constitutes a step forward. May 6 he made before the Académie de médecine a well-founded criticism of the law. According to public opinion, the law of 1838 lends itself to the arbitrary immuring of patients. Legislators have desired above all things to render impossible these arbitrary sequestrations. Accordingly the bill multiplies vexatious formalities with the sole purpose of preventing the unlikely hazard of an unjustified internment of sane persons, by deciding that every case of removal to an asylum ought to be made by judicial process. The bill aggravates instead of ameliorating the lot of the insane. Ballet also protested against the provisions of the bill for strict judicial oversight of patients cared for in their families or placed in foreign establishments. Ballet believes that it is necessary to distinguish three classes of insane: (1) criminals who have committed a crime or misdemeanor under the influence of their disease; (2) the more or less apparently lucid insane who protest continually, formally and coherently against confinement, and (3) those—most numerous of all—who do not protest against confinement or who protest only accidentally as do certain patients in ordinary hospitals, whom, however, no one has any scruples about retaining there when their health demands. The insane of the first two groups, who are the exception, should not be deprived of their liberty without judicial procedure. Ballet protests against the application of such a vexatious measure to patients of the third group, who constitute at least 80 per cent. of the insane. These should be treated like ordinary patients in asylums or sanatoriums which may be entered freely, but which should be strictly supervised, in order to avoid possible abuses, by a commission composed of a magistrate and a physician making regular, frequent and effective visits. Except for the first two classes, Ballet would allow more liberty than under the law of 1853, while the bill calls for more restraint.

Medical Students and the Three-Year Period of Service

L'Association des professeurs des Ecoles de médecine et de pharmacie decided at the last general assembly to send to the ministers of public instruction and of war, resolutions as to the desirability of making use of the special training of students in medicine and pharmacy as far as possible and as soon as possible during their term of military service.

Measures Against Opium

M. Felix Chautemps, deputy from Savoy, has introduced into the Chamber of Deputies a bill forbidding the sale of opium. He shows that many naval officers and colonial official functionaries, as well as many other persons of both sexes are now smoking opium in France and in the colonies. The danger is great, not merely for the victims of this pernicious habit, but also for the nation which expects important public service from them. Accordingly, by this bill, the sale and circulation of opium, morphin, cocain and all analogous substances except as needed for chemistry and pharmacy, are absolutely forbidden in France and French colonies. Infraction of the law, especially of smoking opium in public or private, is to be punished by imprisonment of from two to six months. Accomplices in whatever degree in the sale, circulation or use of opium are subjected to the same penalties.

Medical Secrecy and Industrial Accidents

Is it contrary to the principle of professional secrecy for the physician who cares for a victim of an industrial accident to give information to the employer's physician authorized according to the law to verify the patient's condition in order to avoid unnecessary expense? This question came up in a case before the Cour de cassation which decided that the patient's physician violates professional secrecy if he gives information to his colleague, the employer's physician, with regard to the disease of the victim of industrial accident. On the other hand, the employer's physician commits no violation of professional secrecy in disclosing to his employer, that is, the patient's employer, the information he has received.

Dangers from Dry Shampoos

The question has been raised as to whether or not proprietary lotions for cleaning the hair by what is sometimes called the "dry shampoo" method are innocuous and free from dangers to the health of persons who use them. [Fatal cases of poisoning from carbon tetrachlorid in "dry shampoos" were referred to in the London Letters, July 31, Aug. 28, and Nov. 13, 1909.—Ed.] The matter was brought before the Conseil d'hygiène publique et de salubrité du département de la Seine by the prefect of police, who had his attention drawn to this subject by a letter from Dr. Levassort, who reported the following case:

A woman aged 30, on returning home after a trip, wished to clean her hair by the so-called dry method. She went into her dressing-room, which was rather small and was heated by a radiator which raised the temperature rapidly. After pouring into a basin about two-thirds of the shampoo liquid, she leaned over in order that her hair might fall into the basin. Swiftly overcome by the fumes, she fell backward and lay unconscious for ten minutes, when the maid happened to come in. The patient was put to bed and did not regain consciousness until three hours later, during two of which she presented continuous nervous crises with cries and uncontrollable movements which frightened the family. At this time Dr. Levassort saw her. She was colorless, had an intense headache, suffered nausea and was in a state of hebetude. This continued several days, and for three or four weeks the patient remained in an indescribable condition with mucous pallor and general anemia.

What prompted Dr. Levassort to bring this question before the Conseil d'hygiène was the report from several hairdressers whom he interrogated that their customers when having the hair cleaned are often uneasy and are sometimes made ill. When the substance was analyzed in the municipal laboratory, it was found to be composed of carbon tetrachlorid, not inflammable, though impure, and containing about 5 per cent. of carbon disulphid. Inhalation of the fumes of carbon tetrachlorid causes severe symptoms, and there has even been a death from this cause. The dangers of carbon tetrachlorid are increased when the substance is impure and contains carbon disulphid as in this antiseptic lotion. Carbon tetrachlorid when pure is quite expensive. When impure it costs less but is more dangerous to handle.

Dr. Duguet, who was charged with the presentation of the report on this question, after having consulted a number of dermatologists, among whom were Drs. Jacquet, Thibierge, Darier, Brocq, Hallopeau and Sabouraud, concluded that it is expedient and to the interest of public health not to let so dangerous a substance get into the hands of the public or even of hairdressers, and proposed that its sale be stopped. Duguet's conclusions were adopted by the Conseil d'hygiène.

Epidemic of Typhoid Caused by a Mistake in Piping Water

For the past two weeks there has been an epidemic of typhoid in Paris. During the past week this disease caused 17 deaths in place of the usual 4, and the number of new cases reported was 78 in place of 34, the average. The matter was investigated and it was found that this epidemic began on the premises of the Faculté de médecine on the occasion of the recent international congress of physical education. While the exposition annexed to the congress was being prepared on the premises of the Faculté, a workman charged with repairing and completing branches to the water conduits in this place by mistake connected a pipe for drinking water to a conduit of water from the Seine. This mistake has been corrected but the unfortunate affair teaches a lesson. Pipes containing spring water and raw river water should be placed at a distance from one another and those containing Seine water should be plainly marked in order to prevent any mistake, since Paris has a sufficient supply of spring water to render the use of river water unnecessary excepting for sprinkling and for cleaning.

The Binding Nature of Medical Secrecy

A tradesman asked damages of 5,000 francs ($1,000) in a civil court in the Seine on the ground that a Paris physician had betrayed a professional secret. The court had to decide an interesting and delicate question: whether a physician might differentiate between diseases of a secret or nonsecret character, or whether the rule of professional secrecy is binding in all cases. The court ruled as follows:

Except in those instances specified by law in the interest of public health, a medical secret should be strictly guarded, no matter what the disease is for which the practitioner is called.

The physician should not arbitrarily consider certain diseases secret and others not. This distinction does not rest with him. Some circumstance might transform a disease considered comparatively harmless into just the opposite.

The physician should *not be the judge* of the expediency of giving information which might have serious consequences for the person involved.

For the dignity of the medical profession as well as for those who place themselves under the care of physicians, secrecy should be observed rigorously not only as to the nature of the disease but also as to the circumstances accompanying professional visits.

Therefore the court held that in giving, without the consent of the patient and her husband, a certificate enumerating the number of consultations and telling the nature of the ailment treated, the defendant had made an error. Judging, however, that the matter divulged in this instance, although of a nature to produce injury, had caused but little, the court awarded damages of only 1 franc.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, April 25, 1913.

Personal

Professor Strasburger of Breslau has accepted the position of director of the newly established medical policlinic and therapeutic course at Frankfort-on-the-Main, which are to be considered a department of the proposed university.

Dr. Wolff of Strasburg, professor extraordinary of dermatology, has been appointed regular professor. With this change the number of regular professorships for dermatology is increased. Apparently the positions of professors extraordinary for dermatology also in other Prussian universities will gradually be replaced by regular professorships.

Professor Kaiserling of Berlin has accepted the appointment as successor of Professor Henke at the Cologne institute of pathology.

Professor von Dungern of Heidelberg has been appointed director of the newly established institute for experimental cancer research at Hamburg-Eppendorf.

Professor Bardenheuer will soon retire from his position as instructor of surgery at the Cologne academy for practical medicine and as director of the hospital (*Bürgerspital*).

Professor Dürck of Munich has declined the call to the Cologne academy for practical medicine.

Sixth International Congress on Physiotherapy

(Concluded from page 1651)

INDIVIDUALIZED DIETS IN INSTITUTIONS

A. Schmidt of Halle discussed the rational establishment of diet kitchens in hospitals and sanatoriums. It is not consistent with the principle of the individual nourishment of patients to centralize the kitchen arrangements in hospitals as commonly done at the present day. The reckoning of income plays an essential part in the matter, and also too few schematic forms of diet are employed. Schmidt summed up his experience in the clinics at Halle. The manual preparation of foods is important and therefore reliable kitchen help and naturally the best raw material must be available. The selection of patients who are to receive a special diet must be left to the physician in charge. In Halle the diet kitchen provides (1) a milk-vegetable food diet with salt; (2) a milk-vegetable diet poor in salt; (3) an albumin-fat diet with vegetables poor in carbohydrates; (4) an albumin-fat diet with sugar but without vegetables and potatoes; (5) a mixed protective diet, and (6) a liquid gruel diet. In addition there are individual forms. The excess expense of the diet kitchen amounts to 1 cent per patient per day. Of German sanatoriums only a third furnish a mixed diet, while the rest prefer a vegetarian diet and one-tenth have a special diet kitchen.

DIET IN GOUT

Minkowski of Breslau discussed the dietetic treatment of gout. A satisfactory theory of gout has recently been established by the fact that the origin of uric acid has been recognized in the purin compounds contained in the cell nuclei. The later physical investigations on the solubility of uric acid, particularly its colloidal form, and the exact succession of metabolic processes on which the origin and further fate of uric acid depend, will serve to solve many enigmas in this question. Gout consists in a retention of urates in the tissues and blood, accompanied by a diminished excretion of uric acid. The fundamental principle of the diet is to limit the supply of the purin bodies. But an individual adaptation of the dietetic directions to the severity and character of the particular case is quite necessary. A foodstuff forms the more uric acid the richer it is in cell nuclei. The foodstuff richest in the nuclei is thymus tissue, which contains ten times as much purin bodies as meat and a hundred times as much as milk. Eggs and caviar, bread, potatoes and rice are practically purin-free, while legumes contain as much purin as meat. Beer is extraordinarily rich in purin material, which comes from the yeast and contains in 1 liter as much uric acid as 100 gm. meat. Tea and coffee are free from uric acid.

Garod of London discussed the same subject. He prefers a diet poor in purins to one rich in purins, but would not recommend purin-free diet, as it cannot be taken for a long time without harm. In general he doubts the practical success of dietetic treatment of gout. He would prefer in the case of gouty patients to regulate the amount of foodstuff not only by calories but also by the amount of nitrogen.

German Convention on Internal Medicine

VACCINATION AGAINST DIPHTHERIA

The most important event during the Kongress für innere Medizin, held at Wiesbaden April 18-22, under the presidency of Professor Penzoldt, was the report of von Behring and several of his collaborators on a new prophylactic against diphtheria. As is known, the immunity conferred by diphtheria antitoxin lasts only a few weeks. For this reason, as well as on account of the danger of anaphylaxis which may result from repeated injections of the serum, antitoxin has heretofore been comparatively little used in prophylaxis. According to von Behring, the new preventive will immunize for several months at least. The remedy is not obtained by the passage through animals (horses), but it consists of a mixture of toxin and antitoxin, which is injected directly into man. More detailed information as to the investigations of von Behring, which have aroused the greatest interest, will appear in one of the next issues of the *Deutsche medizinische Wochenschrift* and in French in the *Semaine médicale.*

From the rest of the great amount of material presented at this congress I will mention only the most important communications.

FEVER AND ITS TREATMENT

Meyer of Vienna explained the regulation of heat by the existence of two centers—a heat center and a cold center. Fever he attributed to an increased irritability of the heat center with a simultaneous inhibition of the cold center. In fever the irritability of the heat-regulating mechanism is increased so that the application of external cold, or the use of antipyretics, produces an abnormally prolonged reduction of temperature. In general, fever may be considered a useful protective reaction, but if very intense it may be injurious and must be checked. Von Krehl of Heidelberg took the same view with reference to the origin of fever, and concluded that metabolism in fever was qualitatively the same as in a normal person with deficient nutriment. The source of heat is in the muscles and the large abdominal glands. Changes in the excretion of sugar in diabetics with fever indicate that the sympathetic nervous system plays a rôle in the process of heat regulation. This influence is exerted by means of chemical agents produced by the ductless glands under the stimulation of the nerves. Special nervous influences acting on the abdominal glands may increase the cell metabolism.

In treatment of fever the diet is of special importance. Proteins should be used in moderate quantities and carbohydrates in large amounts, as they are most readily taken by patients with poor appetite and leave the stomach rapidly. The technic of the diet for fever patients is of the greatest importance. The administration of abundant food in diseases with long-continued fever is an important advance. The hydrotherapy of fever is important, but is limited to certain cases and conditions. In the use of antipyretics a sedative influence on the heat center is more important than the reduction of the temperature. To reduce the temperature at any price often leads to unpleasant side-effects, and it is a bad habit to resort to an antipyretic for the reduction of every rise of temperature. In the treatment of typhoid with pyramidon in small doses, Krehl has seen good results, but extreme caution is imperative.

RELATIONS BETWEEN ANAPHYLAXIS AND FEVER

In connection with the addresses on fever, Schittenhelm of Königsberg discussed the relation between anaphylaxis and fever. He described the ordinary symptoms of anaphylaxis. The temperature changes in anaphylaxis can be produced artificially; with small doses it is possible to produce fever with very high temperature and further by graduated reinjections to produce artificially various types of fever. For the explanation of these phenomena it is assumed that when albumin is introduced without passing the intestinal canal it is split up by specific ferments in the blood-vessels, so that poisonous products of decomposition occur. The poisonous character of such products is never so great, however, that it can alone explain the severe picture of anaphylaxis. Neither is it possible to produce evidence that a single poison arises from the decomposition of all albumins. Anaphylaxis has been called in to explain certain features of infectious diseases, the symptoms of fever and other conditions, and it has been assumed that a single poison is produced from all forms of bacterial albumin as well as from albumins of other sources. Many facts are opposed to this view. It must be assumed that there are numerous fever toxins which for the most part are produced from albumins. Physical processes, variations in the colloidal equilibrium of the blood and of the tissue fluids are also given as explanations of anaphylaxis; these alone may produce pathologic phenomena such as are seen in anaphylaxis. In this way fever and a fall of temperature may be produced.

Many other papers and an extensive discussion on this subject brought out numerous theoretical and practical points. Von Müller of Munich and Kraus of Berlin opposed the view of Krehl that in the origin of fever an increased decomposition of albumin is not involved. Kraus based his objection especially on the new experiments of Hirsch who has reported that in anaphylatoxic fever—in contrast with the fever of infection—the metabolism may be even subnormal. In fever from trypanosomes there occurs after a long time a marked increase in the metabolism of albumin and fat, and the fever temperature is not at all influenced, though the metabolism is, by quinin.

Bauer of Innsbruck reported a fall of temperature in a case of tumor of the pineal gland, and he was able to produce a lowering of temperature by the injection of extracts from the pineal gland.

Singer of Vienna was able to secure very favorable influence on the fever of tuberculous patients by injections of small doses of colloidal copper into the blood.

Jaksch of Prague warned against baths in typhoid. He recommends rubbing and opposes the use of antipyretics and of alcohol in this disease.

DIGESTION TRACED BY VITAL STAINING

The discussion of diseases of the digestive organs was opened with an address by Goldmann of Freiburg, on the processes of digestion as shown by vital staining. By vital staining is meant a method of injection in which the staining fluid is injected under the skin of living animals or into the circulation, and in which the combination and fixation of the stain and its behavior in the cells can be followed. By this method, which has been developed for the nervous system by Ehrlich, conclusions can be drawn as to the functioning of the cells. Goldmann, who has done good service in the development of vital staining, injected various stains in various ways into animals, from the frog to the ape, and investigated their behavior with reference to the cells of the digestive tract in order to obtain an insight into the course of digestion.

He directed his attention especially to certain cells occurring free in the structure of the intestinal villi and the connective tissue of the mucous membrane, the rôle of which in digestion has long been known. He conducted his research under various conditions of feeding and included in its scope not only the gastro-intestinal tract but also its auxiliary structures, like the omentum, the lymph-nodes, the spleen and the liver.

For these investigations small animals, as frogs, rats, etc., are best suited. In a rat at the height of digestion, the various sections of the intestinal canal are completely different in their behavior. The esophagus is nearly without color, the cardia portion of the stomach also appears colorless, and the pylorus which contains glands is deeply stained. The staining extends to the duodenum and to the upper part of the small intestine, but diminishes in this and becomes intense again in the neighborhood of the cecum and in the upper large intestine. The variations in staining depend on the number of a certain sort of vital staining-cells. These cells have a great power of movement, so that they are chemotactic; that is, they can be readily attracted and are characterized as so-called phagocytes. These cells are found most frequently in the network of the mucous membrane of the digestive tract. They are constantly moving about so that no layer of the intestine is free from them. In starvation they are found to be very rare. These migratory phagocytes do not come from the blood or from the wall of the intestine; their principal place of formation seems to be the omentum. They are found also in the spleen and the lymph-nodes. The process of digestion consists in these cells entering the intestinal wall laden with products of digestion which they give up to the intestinal villi and leaving the intestinal wall again as empty cells. Moreover, the lymph-nodes placed behind the stomach, the cecum and the omentum also take part in the process, as the cells are met in these organs, mostly filled with red blood-cells; they are also found in the spleen.

It has been believed hitherto that a destruction of blood-cells which are weakened with age takes place only in the spleen. Now it is shown that there become free in this process important substances which are taken up by the phagocytes and play an important rôle in the absorption of nutriment. The digestive process is connected with a cell reaction occurring in the mucous membrane, characterized by the appearance of the so-called migrating phagocytes. They have also been found in other conditions. A rat infected with trichina showed these cells in great masses on the individual trichina capsules; and in a case of peritoneal cancer in a mouse they were found in the neighborhood of the tumor, while the intestine was free. The cancer had drawn the cells away from the intestine to itself. From this investigation it appears that the organism protects itself against the entrance of substances foreign to the body, blood and cells, and endeavors to convert them into suitable substances. The lecture was supplemented by the statement of Friedrich of Königsberg who had studied the conditions in the thorax, pleura and the lungs by similar experiments.

(To be continued)

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 10, 1913.

Changes in the Organization of the Vienna Clinics

A number of important changes will take place shortly in the Vienna clinics. The second internal clinic, which was managed formerly by von Neusser, will be taken over by Ortner, and the present fourth clinic (Chvostek) will be called the third, while the fourth clinical chair will be discontinued, as there is not sufficient material at disposal for teaching purposes in four clinics. Thus we shall have only the three clinics: von Noorden's (who also will soon go away from Vienna), Ortner's and Chvostek's. The wards occupied by the third medical clinic will be devoted to the use of a new, third surgical clinic. This new institute will be devoted to elementary teaching of surgery and will be controlled by the two existing surgical clinics (von Eiselsberg's and Hochenegg's). Part of the accident cases and first-aid cases will also be sent to this institute. The lectures in the third surgical clinic will be delivered not by ordinary professors, but by the assistants of the two clinics. Negotiations are also being entered on between the senate of the university and several eminent men in Germany and Austria as to the successorship in von Noorden's clinic. As this famous scientist has given due notice that he will terminate his stay in Vienna with the end of the summer term of 1913, the question is a pressing one.

Alcohol in the Austro-Hungarian Army

The present unsettled political conditions in Europe have resulted in a large number of soldiers being kept in readiness for more than half a year, and the provisions for hygienic welfare of several hundred thousand men are being put to a crucial test just now. A fact worthy of notice is the nearly complete absence of alcohol from the regimen or daily bill of fare of the soldiers on the frontier. The water-supply in that country being none too good, care has been taken to instruct the soldiers in this respect, and they are being constantly told that the old statement, "bad water is made innocuous by alcohol," is a dangerous misrepresentation. It has also been ascertained that whenever a period of endurance was required of the soldiers those who took no alcohol were much more fit for work than the other men. Only when a rapid but short strain was necessary a little alcohol might be beneficial or at least harmless. In mountain climbing, the consumption of alcoholic beverages was distinctly detrimental to the accuracy of stepping. The effect of sweetened liquid (sweet tea, coffee, milk or sweet mild wine) was very gratifying. The wine mentioned here is the black Italian or Turkish wine, with a very low percentage of alcohol. But even this beverage was disallowed when longer exercises were taken. The experiences obtained by the army authorities will no doubt lead to a complete elimination of alcohol as "war rations" except as a stimulant and for purely therapeutic measures, although here also experience speaks at least not in favor of an addition of alcohol for pneumonia, typhoid and general debility. It is also noted that total abstainers form a negligible fraction among those soldiers who have to be punished for disorderly conduct, breach of discipline or other minor offenses of a military nature, although total abstention is frequent now in the rank and file of the army. In the anti-alcohol movement in Europe, our army is one of the leaders.

Marriages

Oliver Wendell Holmes Mitchell, M.W., Columbia, Mo., to Miss Pauline Preston Settle of Springfield, Mo., at Lancaster, Mo., May 15.

Henry Benjamin Treakle, M.D., Matthews County, Va., to Mrs. Sadie B. Moriarty at Gwynn's, Matthews County, Va., May 12.

Ernest A. Guyton, M.D., Eau Claire, Wis., to Miss Goldie Hopkins of Trempealeau, Wis., at St. Paul, Minn., April 26.

William Morgan Smith, M.D., Alexandria, Va., to Mrs. Annie Staunton Murphy Cox of Washington, May 14.

Nathaniel Graham Alcock, M.D., Pueblo, Colo., to Miss Marjory Bates of Yankton, S. Dak., May 7.

Raymond Bartlett Morris, M.D., Olean, N. Y., to Miss Mary L. Parrish at Baltimore, May 14.

James P. Caldwell, Jr., M.D., Marble, Minn., to Miss Sylvester at Plainview, Minn., May 14.

Edward Smith Blaine, M.D., Milwaukee, to Miss Edith Walters Packer of Chicago, May 26.

Flavius O. Plunkett, M.D., Lynchburg, Va., to Miss Ruth Lewis at Lauderdale, Va., May 12.

Deo P. Matthewson, M.D., Bath, N. Y., to Miss Lucy Sweet of Towanda, Pa., May 13.

James W. Craig, M.D., to Miss Florence Mae Bramble, both of Vinita, Okla., May 7.

Frank Ambrose Lagorio, M.D., to Miss Ella A. Triner, both of Chicago, May 20.

John R. Smith, M.D., Douglas, Ga., to Miss Emma Wofford of Atlanta, May 13.

Deaths

Elmore S. Allbee, M.D. Albany (N. Y.) Medical College, 1870; a member of the American Medical Association; for ten years health officer of [illegible] County, N. H., and Bellows Falls, Vt.; a very [illegible] official; a practitioner of Bellows Falls, Vt., since 1875, with a large family and consultation practice in that part of Vermont and New Hampshire adjacent to Bellows Falls; a practitioner held in most affectionate regard by his patients and professional brethren; died at his home in Bellows Falls, May 14, from pneumonia, aged 65.

Samuel Ross McCready, M.D. Western Reserve University, Cleveland, Ohio, 1888; of Leetonia, Ohio; a member of the American Medical Association; health officer of Columbiana County and city physician of Leetonia; aged 57; while driving his automobile in Leetonia, May 14, was caught by a rope which was stretched across the street and thrown from his machine, breaking his neck.

James Harvey Manown, M.D. Jefferson Medical College, 1844; a charter member of the West Virginia State Medical Association; surgeon of the Fourteenth West Virginia Volunteer Infantry during the Civil War; physician in charge of the Weston (Va.) State Hospital from 1885 to 1890; died at his home in Kingwood, W. Va., March 20, from senile debility, aged 91.

James B. Olmsted, M.D. Pulte Medical College, Cincinnati, 1881; of Portland, Ore.; supreme medical director of the United Artisans, who was seized with a cerebral hemorrhage on a Northern Pacific train between Ellensburg and North Yakima, Wash., three weeks before; died in St. Elizabeth's Hospital, North Yakima, May 18, from a second hemorrhage, aged 56.

Emery Wendell Foster, M.D. John A. Creighton Medical College, Omaha, Neb., 1902; formerly of Worland, Wyo.; a member of the Wyoming State Medical Society; died in his apartments in Omaha, May 12, from the combined effects of atropin, hyoscin and morphin, believed to have been self-administered with suicidal intent, aged 37.

Robert Franklin Raines, M.D. St. Louis College of Physicians and Surgeons, 1897; a member of the Nebraska State Medical Association and formerly a member of the American Medical Association; commissioner of insanity, coroner, and county physician of Webster County; died at his home in Red Cloud, April 20, from erysipelas, aged 44.

Henry N. Keener, M.D. Homeopathic Medical College of Missouri, St. Louis, 1868; formerly secretary of the State Board of Health of Missouri and a hospital steward during the Civil War; for a time city physician of Springfield, Ill., and later coroner of Bureau County, Ill.; died at his home in St. Joseph, Mo., May 12, aged 71.

David Franklin Stone, M.D. University of Toronto, Ont., 1870; a member of the American Medical Association; for many years a member of the staff of Mercy Hospital, Bay City, Mich.; at one time president of the Lapeer County School Board; died at his home in Bay City, May 18, from heart disease, aged 70.

Duke Williamson Hunter, M.D. Jefferson Medical College, 1854; of Kansas City; a pioneer physician of Kansas City and major surgeon of the Sixth Missouri Infantry, C. S. Army, during the Civil War; died at the home of his daughter in Kansas City, April 22, from the effects of a fracture of the hip, aged 80.

William Cowan Carson, M.D. University of Maryland, Baltimore, 1856; an academic graduate of Princeton College in 1853; died at his home in Port Deposit, Md., May 14, aged 80.

Michael Francis Joseph Crowley, M.D. New York University, New York City, 1890; died at his home in New York City, May 14.

Albert Eben Miller, M.D. University of Pennsylvania, Philadelphia, 1864; of Needham, Mass.; a member of the Massachusetts Medical Society and Boston Gynecological Society; professor of physiology in the College of Physicians and Surgeons, Boston; died at East Orleans, Mass., April 21, aged 79.

John William Kyger, M.D. University of Virginia, Charlottesville, 1868; a member of the Missouri State Medical Association and professor of pediatrics in the Medical Department of the University of Kansas; died at his home in Kansas City, Mo., May 5, from cerebral hemorrhage, aged 64.

Franklin Benjamin Gottschalk, M.D. Northwestern University Medical School, 1894; a member of the Illinois State Medical Society; formerly professor of electro-therapeutics in Jenner Medical College; died at his home in Chicago, May 22, from septicemia, following a wound of the foot, aged 45.

Wilson John Rugh, M.D. Columbus (Ohio) Medical College, 1877; of Pittsburgh; a member of the American Medical Association; supreme treasurer and past supreme commander of the Knights of Malta of the Continent; died in the West Penn Hospital, Pittsburgh, May 10, aged 64.

Herbert Edward Balmain Dickson, M.D. L.R.C.P. Ireland, 1886; L. R. C. S. Edinburgh, 1889; formerly a member of the staff of the Royal Ophthalmic Hospital, London; a specialist on diseases of the eye with office in Chicago; died at his home in Hinsdale, Ill., May 15, aged 49.

David Engelman, M.D. Jefferson Medical College, 1864; a member of the Medical Society of the State of Pennsylvania; formerly president of the State Board of Health; twice a member of the legislature and once state senator; died at his home in Easton, May 14, aged 77.

William C. Hamilton, M.D. University of Paris, France, 1860; surgeon in the Confederate Service during the Civil War; a practitioner of Chicago until 1879 and thereafter a practitioner of Topeka, Kan.; died at his home in that city, May 11, from paralysis, aged 74.

Theodore Wing Peers, M.D. University of Michigan, Ann Arbor, 1885; emeritus professor of diseases of children in Kansas Medical College, Topeka; a member of the Kansas Medical Society; died at his home in Topeka, May 12, from cerebral hemorrhage, aged 56.

Mathias A. T. Hoffmann, M.D. Wisconsin College of Physicians and Surgeons, Milwaukee, 1901; of Campbellsport, Wis., aged 34; was struck by a train and instantly killed May 18, while crossing the Northwestern tracks near Campbellsport in his automobile, aged 34.

George W. Haile, M.D. Medical College of Ohio, Cincinnati, 1866; a member of the Academy of Medicine of Cincinnati; died at the Good Samaritan Hospital Annex, Cincinnati, April 23, from double pneumonia, complicating diabetes of long standing, aged 67.

William E. McDivitt, M.D. Sioux City (Ia.) College of Medicine, 1905; a member of the Nebraska State Medical Association; died at Magdalena, Mex., May 20, while en route in an automobile from Southern California, to his home in McCook, Neb., aged 34.

Richard Francis Murphy, M.D. New York University, New York City, 1889; a specialist on diseases of the nose and throat and physician to the Actors' Fund of America; died at his home in New York City, May 10, from cerebral hemorrhage, aged 51.

Edward B. Belknap, M.D. University of Buffalo, N. Y., 1892; a member of the Medical Society of the State of New York; for twenty years a practitioner of Wyoming County; died in the Rochester (N. Y.) General Hospital, May 12, from nephritis, aged 46.

Joseph Manuel Delaterga, M.D. Long Island College Hospital, Brooklyn, 1882; a surgeon in the United States Volunteer Service in Cuba during the Spanish-American War, and a practitioner of New York City; died at the Brooklyn Hospital, May 7.

Bennett P. Windsor, M.D. John A. Creighton Medical College, Omaha, 1896; mayor of Mount Auburn, Ill.; was shot in a political feud, May 16, and died in St. John's Hospital, Springfield May 17, from the effects of his wound, aged 38.

Ernest Newton Shepard, M.D. Jefferson Medical College, 1895; a member of the American Medical Association; visiting physician and surgeon to the Bradford County (Pa.) Almshouse, died at his home in Burlington, April 26, aged 42.

Ernest P. Bixby, M.D. New York Homeopathic Medical College, New York City, 1897; of Barre, Mass.; formerly assistant physician at the Massachusetts State Sanatorium; died in Canyon City, Colo., March 24, from tuberculosis, aged 39.

Thomas Henry Heffernan, M.D. Northwestern University Medical School, 1896; a member of the American Medical Association and a prominent practitioner of Dubuque, Iowa; died at his home, May 8, from diabetes, aged 45.

Wyatt Stephen Oates, M.D. Atlanta, Ga., 1876; who for many years devoted himself to real estate interests, rather than to the practice of medicine; died at his home in Headland, Ala., April 12, from cerebral hemorrhage, aged 61.

Alrick T. Payne, M.D. Medical College of Ohio, Cincinnati, 1875; one of the oldest practitioners of Terre Haute, Ind.; coroner of Vigo County from 1894 to 1898; died at the home of his daughter in Terre Haute, May 12.

Edgerton Haskell Hart, M.D. New York University, New York City, 1892; a medical missionary of the Methodist Episcopal Board in China; died at his station in Wu Hu, April 14, from typhus fever, aged 45.

John Adam Conrad, M.D. Long Island College Hospital, Brooklyn, 1867; formerly a member of the Pennsylvania State Legislature; was found dead in his office in Robesonia, Pa., May 14, from heart disease, aged 70.

Simon Alexander Kemp, M.D. University of Pennsylvania, Philadelphia, 1866; one of the coroners of Sullivan County; died suddenly at his home in Callicoon Depot, N. Y., May 5, from cerebral hemorrhage, aged 66.

William Irby Hall, M.D. University of Virginia, Charlottesville, 1893; of North Tazewell, Va.; who had been in Florida during the winter in search of health; died in a sanatorium at Coshocton, Ohio, May 4, aged 45.

John Latimer Short, M.D. University Medical College, Kansas City, Mo., 1885; oculist and aurist to Grace Hospital, Versailles, Mo.; died at his home in Rolla, Mo., May 12, from cerebral hemorrhage, aged 59.

John Per Gustaf Björkman, M.D. University of Upsala, Sweden, 1887; Eclectic Medical College of the City of New York, 1890; died at his home in Racine, Wis., April 28, from diabetic gangrene, aged 59.

Robert Stephens Hunt, M.D. University of Nashville, Tenn., 1900; a member of the State Medical Association of Texas; a prominent practitioner of Rogers, Tex.; died in Temple, Tex., May 8, aged 44.

Francis Winfield Stiles, M.D. Cleveland University of Medicine and Surgery, 1852; formerly of Suffolk, Va.; died at his home in DeFuniak Springs, Pa., March 19, from cerebral hemorrhage, aged 86.

Charles Frederick Wocher, M.D. Medical College of Ohio, Cincinnati, 1891; a well-known physician and druggist of Cincinnati; died at his home, May 15, from pneumonia, aged 56.

George Gordon Wilcox, M.D. Rush Medical College, 1882; a member of the American Medical Association; local surgeon at Seneca, Ill., for the Rock Island system; died about May 11, aged 63.

Charles Weckslin, M.D. Eclectic Medical College of the City of New York, 1907; Long Island College Hospital, Brooklyn, 1909; died at his home in Brooklyn, May 4.

John W. Covert, M.D. Cleveland University of Medicine and Surgery, 1879; a veteran of the Civil War; died at his home in New Castle, Pa., about May 18, aged 75.

Benjamin Franklin Brown, M.D. Ohio Medical University, Columbus, 1896; died suddenly at his home in Shawnee, Ohio, May 13, from heart disease, aged 45.

Jesse Williams Henry, M.D. Georgetown University, Washington, D. C., 1866; died at his home in Brooklyn, N. Y., May 16, from senile debility, aged 84.

Thomas T. Bonner, M.D. Memphis Hospital Medical College, 1888; a member of the Mississippi State Medical Association; died at his home in Tupelo, May 10.

Edward William Carhart, M.D. Albany (N.Y.) Medical College, 1898; died at his home in Brooklyn, May 15, from fatty degeneration of the heart, aged 56.

J. W. McMullen, (license, Indiana, 1897); a practitioner of Warren County for thirty-eight years; died at his home in Pine Village, May 7, aged 62.

Almon James Ryan, M.D. Rush Medical College, 1875; a physician and druggist of York, Neb.; died at his home in that place, May 12, aged 60.

Joseph Warren Cobb, M.D. Eclectic Medical Institute, Cincinnati, 1853; died at his home in Wichita, Kan., April 3, from senile debility, aged 85.

Henry Luther Miller, M.D. Atlanta (Ga.) Medical College, 1894; died at his home in Hampton, Fla., April 26, from pneumonia, aged 46.

Charles C. Prichard, M.D. University of Louisville, Ky., 1884; died at his home in Harrisonburg, La., April 29, aged 58

Peter A. Sheley, M.D. Medical College of Ohio, Cincinnati, 1876; died at his home in Louisville, May 12, aged 62.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

BANNERMAN'S INTRAVENOUS SOLUTION

A Nostrum First Exploited as a Consumption Cure—Now as a Cure-all

Veterinary medicine, apparently, does not present the opportunities for quackery that are to be found in the treatment of human beings. The probable reason for this is that live stock is valuable and its owners are not willing to take chances. Human life is cheap, and the protection it is accorded, small. These facts may explain why veterinarians with quackish tendencies go into the "consumption-cure" business. In this connection our readers will recall Eckman's Alterative, a fraudulent consumption cure put on the market by a veterinarian, and Yonkerman's Tuberculozyne, another equally fraudulent consumption cure, put out by a horse doctor.

Bannerman's Intravenous Solution is said to be the "discovery" of William Bannerman of Chicago. Bannerman is a veterinarian who claims to have "spent over twenty years in the experimental field, among the lower animals, where he found all the different diseases that man is heir to." "My fight," he declares, "was to cure the great white plague" and at last he found, so he says, "a remedy that may be instrumental in driving from the land the dreaded White Plague."

When first advertised it was known as "Bannerman's Tubercular Solution"; later, as "Bannerman's Germicidal Solution," and more recently it has been exploited as a cure-all under the name "Intravenous Solution." Being a veterinarian, Bannerman hired a licensed physician for his "secretary and medical director." To fill this position he employed for some time a man who seems to have been connected with a "diseases-of-men" outfit and who furnished Bannerman with testimonials in the form of "clinical reports."

Bannerman sells not only his "Intravenous Solution," but also an "Internal Solution." Here are some of the claims made for his nostrums: the crudest of "patent-medicine" exploiters surely never made more outrageously false ones. The spelling, punctuation and composition are original with Bannerman:

> "The Bannerman medicines are positive blood builders and germ destroyers, they regulate your bowels, drives away that Catarrh, increases your weight and energy."
>
> "They stop the cough, loosen the phlegm, throw off the mucous and make expectoration easy, stops your night sweats, reduces your fever, increases your strength restores your appetite, overcomes that weak, tired, depressed feeling."
>
> "Pneumonia a dreaded disease, will succumb to our treatment six hours after the first injection and this holds good in tuberculosis, anemia, bright's, diabetes, rheumatism in fact any disease caused by a lowered resistance."

In 1910, Bannerman published what purported to be the result of "scientific research" done by a "skilled bacteriologist and pathologist"—H. M. Eisler. This "research work" was said to have been done at the "Practitioner's Laboratory," which had for its pathologist "H. M. Eisler, M.D., Ph.D.," and for its "consulting diagnostician," Henry R. Harrower, M.D. The value of a report emanating from this laboratory will be better appraised when it is known that "Dr." H. M. Eisler had offices in the same suite as Bannerman and that he exploited the "Intravenous Solution" in his illegal and unqualified "practice."[1]

Henry R. Harrower also had offices in the same suite with the Bannerman concern, prepared advertising "copy" for Bannerman and in addition wrote and was able to get published in a medical journal—the *International Journal of Surgery*—what purported to be a report of a case of puerperal sepsis "successfully treated" by the Bannerman Solution. He also acted as a "demonstrator" for the Bannerman product in "boosting" the stuff in the eastern states. At the same time, Harrower was publishing two pseudomedical journals which, of course, obtained their share of the Bannerman advertising. Such an arrangement must have been a highly satisfactory one for everybody concerned—except the public and the medical profession.

What is the composition of this product which has been variously known as a "germicidal solution," a "tubercular solution" and an "intravenous solution"? Nobody knows except Bannerman and it is doubtful whether he knows. In 1910, Bannerman published the following "formula":

> Each fluid dram of Bannerman's Intravenous Solution represents:
>
> Acid Salicylic, gr. 8 1/20.
> Hydrargyrum Albuminate, gr. 1/20.
> Creosote, min. 1/20.
> Acid Carbolic, traces.
> Guaiacol, traces.
> Calcium Carbonate.
> Sodium Chlorid.
> Iron.
> Excipients, Solvents, etc.

Of course this "formula" means nothing. No quantities are given for the calcium carbonate, sodium chlorid or iron, nor is any intimation given as to the form in which the iron is used. This, as we said, was in 1910. In 1911, the published "formula" was different. It was then—and still is—given as follows:

> Each 10 c.c. of Bannerman's Solution contains:
> Acid Salicylic, 2 grs.
> Hydrargyrum Albuminate, 1/9 gr.
> Ferrum, 4¼ grs.
> Sodium Chlorid, 6 1/5 grs.
> Calcium Carbonate, 2 grs.
> Phenol Group, 1/25 gr.

In 1910, the average dose recommended was a fluidram (about 4 c.c.); in 1911, the average dose recommended was 2½ fluidrams (10 c.c.). It will be noticed that the amount of salicylic acid in the dose recommended in 1910 is ten times as great as that in the dose recommended in 1911; and the amount of the "phenol group" in the dose recommended in 1910 is more than three times as large as that in the dose recommended in 1911. Incidentally, Bannerman does not explain how he succeeds in dissolving 2 grains of a practically insoluble substance—calcium carbonate—in 10 c.c. of liquid.

Thinking physicians who have received the Bannerman literature and read the "formula" have naturally wondered what form of iron is used in the preparation. This is of especial interest from the fact that the exploiters claim to give 4¼ grains of "iron" to the dose. One physician took the trouble to write to the Bannerman concern and ask point-blank about the mysterious "Ferrum" in the "Intravenous Solution." In a letter in which he vibrated dizzily between the first and third persons, Bannerman replied:

> "I claim nothing new in it [the Intravenous Solution] save the iron and one other article. We give our formula and proportions, but the writer has spent many years in producing a form of iron which is congenial to the blood, and the secret is the way of combining these elements which produces the results which we are having from it.
>
> "He has no comment whatever to make on the iron other than to say this. It is not made out of pig iron, horseshoe nails or

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[1] To leave the main story for a moment: H. M. Eisler writes M.D. after his name. So far as our records show he is not a graduate of any medical college; certain it is he is not, and never has been, licensed to practice medicine in the state of Illinois. Yet H. M. Eisler has admitted under oath that in 1911 he was treating—"with drugs and medicines"—a consumptive in the city of Chicago. He used, according to the victim's relatives, the Bannerman Intravenous Solution. Instead of being benefited by Eisler's "treatment," the patient steadily grew worse and finally died. Eisler claimed that the consumptive's brother agreed to pay for the treatment and, as a matter of fact, did pay $180. Finding that the patient was becoming worse, the brother refused to pay more, whereupon Eisler brought suit for the balance of the $400, which he claimed was due him. The man who was sued declared under oath that Eisler had agreed to cure his brother and instead of so doing, the treatment had proved "improper and harmful to the patient and the patient became worse under said treatment." The jury unanimously agreed with the defendant. The result was Eisler not only failed to get the balance of the $400 but had to pay the costs in the case.

> any iron of this kind. It is an entirely new discovery, which I know you would not want me to divulge, and which I could not do and would not do . . . This Intravenous Injection is like the great God-Head, three in one and one in three. I cannot take one from it neither can I add one to it . . .
>
> ". . . the blood digests the food and carries the food to make up the different elements of man. It is the alpha and omega of all diseases. . . ."

Members of the medical profession who are using the Bannerman nostrum will doubtless be relieved to learn that they are not loading up their patients with "pig iron, horseshoe nails or any iron of this kind." This relief may be tempered by the knowledge that they still do not know just what drugs their patients are getting.

In another letter, Wm. Bannerman & Co. give physicians this remarkable information:

> "Doctor, as you know there are just two elements to man—the blood and the spirit. The blood digests the food and carries it away to make up the different parts of the body."

And a little later, in the same letter, the profession is told that Bannerman's Intravenous Solution:

> ". . . will increase the number of red blood-cells, regulate the whites . . ."

How the leukocytes are to be "regulated" is not explained but possibly this problem is such an elementary one to a veterinary of Bannerman's capabilities that he thinks it unnecessary to go into detail. P. B. Thatcher, M.D., who, with E. J. Hackney, M.D., is exploiting the Bannerman product in Philadelphia and vicinity, refers to Bannerman as:

> "The chemist whose master mind worked this hitherto unsolvable problem out to a successful conclusion. . . ."

"Regulating" white blood-corpuscles in individuals composed of two elements—"blood and spirit"—may be a trivial thing for "master-mind" chemists, but to the average physician it appears no mean task. We are assured it can be done, however, with the Bannerman product, "$3.00 per ounce f. o. b. Chicago." In Philadelphia it sells for $5.00 an ounce.

Seriously, however, the fact that preparations of this kind, exploited as this is, should be used by any members of our profession, is well-nigh unbelievable. Happily there are very few physicians, we believe, who are so blind to their responsibilities to their patients as to use such a nostrum or who are so ignorant or thoughtless as to be influenced by the advertisements of such a concern. Possibly the following quotations, portions of which we have italicized, may be a partial explanation for its use in some instances:

> "It is a treatment that can only be given by a physician, and *it is a paying, profitable treatment.*"
>
> "Our solution can only be administered by a physician and *it will increase his practice and remuneration.*"
>
> "They [the patients] realize that the injection is going directly into the blood *and pay up accordingly.*"

To summarize, here are the facts regarding the Bannerman product:

1. It is put on the market by a man who is neither a physician nor a pharmacist and whose only claim to medical knowledge is that of being a veterinarian.
2. It was first exploited as a cure for consumption and has been known by the various names, "Tubercular Solution," "Germicidal Solution" and "Intravenous Solution." It is now sold as a cure-all.
3. Its composition is secret.
4. A fake formula is published that is meaningless to physicians and absurd to chemists.
5. The claims made for it are both false and fraudulent.
6. It is, in short, a product whose use appeals chiefly to cupidity and ignorance.

A WORLD-WIDE MOVEMENT

Views of the Nostrum Evil on Opposite Sides of the Globe

How wide-spread and general is the movement against the nostrum evil as it affects the public both directly and via the medical profession, the following quotations from journals arriving in the same week's mail, will show. The first, from the *Australasian Medical Gazette*, is a statement made by Dr. Newman in his presidential address at a recent meeting of the Geelong (Victoria, Australia) Division of the British Medical Association:

> "Side by side with the legitimate advances in the practice of medicine and surgery one cannot help noticing some methods of procedure open to criticism. We are always railing at the crass stupidity and unlimited credulity of people in general—how they are all like sheep, easily led, following every quack in droves and swallowing each newly-advertised cure-all with avidity; and yet we, as a profession, are tarred with the same brush. We are just as easily led, just as sheepish, just as easily carried away by clever advertising. Witness the advent of the innumerable proprietary medicines and preparations. How we read the trade advertisements about their wonderful qualities, how we all 'have a go' at ordering them on the strength of those advertisements, then discard them to have 'another go' at the next puffed-up drug! And the worst of it is that the more level-headed have, in self-defense, to swim with the tide, for if they do not their patients soon come to think them behind the times and transfer their patronage to some one else whom they believe to be up to date."

And this, from a report in the London *Times* of the Chancellor's Budget when read to the House of Commons:

> "There is a substantial drop in medicine labels. (Laughter.) This is due to the fact that the sale of patent medicines fell off—(cheers)—largely and quite suddenly, owing to the Insurance Act—(cheers)—and, perhaps, partly to the revelations of the Committee which is sitting, which have shown what the ingredients of some of the more popular of these medicines are. (Laughter)."

Correspondence

A New Method of Treating Neuralgia of the Trigeminus by the Injection of Alcohol into the Gasserian Ganglion

To the Editor:—In The Journal, May 3, 1913, p. 1354, Dr. Julius Grinker gives credit to Dr. Härtel of Berlin for working out a method for injecting the gasserian ganglion. In 1900 Schlösser began experiments to devise a method of direct injection of the ganglion; and in 1907 (*München. med. Wchnschr.*, April 30), he published a method which, so far as I can judge, is identical with Härtel's.

I desire to call attention to the intrabuccal method of injecting the gasserian ganglion described by Ostwalt. After experimenting with both methods on cadavers, I preferred decidedly the Ostwalt or intrabuccal route. I have injected the gasserian ganglion in the living subject sixteen times. Three patients were injected with alcohol for neuralgia, and in thirteen patients 0.5 per cent. of novocain was injected to produce anesthesia for the performance of surgical operations. In two other patients I failed to reach the ganglion either by the intrabuccal or extrabuccal method. One of these patients was a child aged 9, the other a man of 70. Among sixteen cadavers I found a man of probably 40, whose foramina were so deformed as to render it impossible to reach the ganglia by the mouth or cheek method.

I am enthusiastic over the method for anesthesia, especially for resections of the upper jaw, sinus operations and operations involving the eye and orbit. I have done one craniectomy with this method of anesthesia. I have used from 1 to 2 drams of the novocain solution, injecting a little as soon as the nerve trunk is reached with the needle; the remainder is injected after the foramen is entered.

Success with this method depends largely on a close study of types and anatomic variations of individual skulls. The combined width of the superior maxillary bones, the direction of the auditory canals and the prominence of the malar processes are especially to be noted. I believe that it is well to introduce the needle a little higher than the estimated position *of the foramen for three reasons.* 1. If the needle does not enter the foramen it will be blocked by the great wing of the sphenoid. 2. It is sometimes possible to follow the under surface of the great wing and feel one's way into the foramen. 3. When the foramen is entered with the needle in the high position, its point, after passing through the ganglion, is blocked by the anterior surface of the petrous portion of the temporal bone. When the needle is introduced at too low a point, and its direction is consequently more vertical than would be necessary with a higher insertion, the needle, if inserted too far, may pass over the petrous portion of the temporal bone into the superior petrosal sinus or brain.

John G. Sheldon, M.D., Kansas City, Mo.

[Dr. Sheldon's statement concerning the priority of Schlösser was referred to Dr. Grinker, who replies:]

To the Editor:—In Schlösser's report on the treatment of trigeminus neuralgia by means of alcohol injections into the *branches* of the trigeminus nerve, made before the Congress für innere Medizin, held in Wiesbaden in 1907, an account of which was published in the *Münchener medizinische Wochenschrift*, April 30 of the same year, the following occurs:

"To reach the inferior maxillary nerve, I introduce my fingers into the patient's mouth, feeling for the inner end of the large wing of the sphenoid. I then pierce the cheek with a blunt stout needle, reaching the oral cavity a little below the previously introduced finger, and then I gradually work up toward the base of the skull until the inferior maxillary nerve is reached. The previously filled syringe is then attached and 0.5 gm. alcohol injected. After a short interval another 0.5 to 1 gm. of alcohol is injected."

In these directions, which are rather indefinite for any one else to follow, no landmarks being given, nor any other guide except the finger, Schlösser gives a method of injecting the *third branch* of the trigeminus—not of the *gasserian ganglion.* Härtel's merit consists in having given us an *extrabuccal* method of reaching the gasserian ganglion directly. Any one who wishes can find not only the foramen ovale, but also the situation of the ganglion which is in the same line with it, provided he follows Härtel's explicit directions. I cannot see how the correspondent can consider these methods identical, when one is a route to the branch as it leaves the base of the skull, the other a direct entrance into the skull through the foramen ovale, with a view of injecting a structure lying beyond it.

Julius Grinker, M.D., Chicago.

Tariff on Surgical Instruments

To the Editor:—In The Journal, April 26, 1913, p. 1322, are some resolutions in which the tariff on surgical instruments is incorrectly stated. Instead of 50 per cent. it is 45 per cent. and the tariff on instruments in rough, instead of 15 per cent., is 30 per cent. It may also be of interest to know that the new tariff pending in Congress fixes the duty on surgical instruments at 25 per cent., whether they are finished or unfinished.

G. P. Pilling & Son Company,
per C. J. Pilling, President.

[Comment.—The resolutions referred to were passed by the Jefferson County (Ky.) Medical Society, and we call this matter to their attention as well as to the attention of other societies which may take action on the subject.

In The Journal, May 3, 1913, p. 1382, is a comparison of the present law with the Underwood bill now pending in Congress. Although this article does not refer to the resolutions of the previous issue, in effect it corrects the error which the county society made.—Ed.]

A Useful Pharmacopeia

To the Editor:—Dr. Osborne's recent article (A Last Plea for a Useful Pharmacopeia, The Journal, May 10, 1913, p. 1427) has interested me greatly. It is a shame that inert drugs still find a place in the Pharmacopeia. I urged their omission at the last Pharmacopeial Convention and frequently before that, and I am glad to note that their number is diminishing in the recent editions of the Pharmacopeia. What is of more importance, however, is the retention of multiple preparations of many drugs when they are not needed; their use by medical men should be discouraged by their omission from the Pharmacopeia. For instance, three or four preparations of iron or of cinchona are as good as all that are included in the Pharmacopeia. It certainly is possible to determine which are therapeutically and pharmaceutically the best for prescription in solution or in pill or capsule and possibly for hypodermic administration. Let us encourage the use of these best preparations and discourage the use of others. As Dr. Osborne writes, the omission of a drug from the Pharmacopeia does not prevent its use although it may discourage its employment. This was evidently the view taken by medical societies and their committees which studied the subject before the last Pharmacopeial Convention was held.

Unfortunately, the medical men elected to that convention did not attend it so generally as they should, and therefore the pharmacists who were present again kept control of the making of the Pharmacopeia.

The scope of the Pharmacopeia should be decided by medical men, and pharmacists should decide how preparations are to be made.

I wish that the revision now under way had been made on this plan. N. S. Davis, M.D., Chicago.

The First Street-Railway Ambulance-Car

To the Editor:—In the *Scientific American*, April 5, 1913, p. 316, in the description of a street-car ambulance for Bahia, Brazil, the statement is made that "not until the present time has there been manufactured a conveyance for the transportation of hospital patients over the street-car tracks of any city."

That South American may not be given credit which rightly belongs to our own country I wish to point out that in December, 1894, an ambulance-car which I originated while health commissioner of St. Louis went into service. Descriptions of the car appeared in several publications at the time.

George Homan, M.D., St. Louis.

Swindler Maynard Brought to Bay

To the Editor:—Last fall (Oct. 5, 1912, p. 1303) you published an announcement for me concerning a $50 reward offered for information regarding a fugitive from justice, one Maynard, who had fleeced a lot of physicians and others during the spring of 1912 and then had absconded in June. The clippings which I enclose show the details of his arrest and fight to prevent just punishment. Before the days of The Journal such a fellow would probably have plied his trade for years. Here is an important use for The Journal. Our officers of the law had almost given up hope of finding him when I told them I felt sure that I could locate him with your help. Just a few days after your announcement that this man was wanted, a member of the Association telegraphed our sheriff from Lincoln, Neb., that Maynard was there, and this led to his arrest and punishment. Maynard's offenses were in collecting old accounts for merchants, doctors and lawyers and then disappearing without making returns on the collections to the merchants to whom an accounting was due. When found in Nebraska, he was presumably operating the same game. He resisted extradition, appealed to the Supreme Court and made considerable trouble before he could be taken from Nebraska to Michigan. He was finally sentenced to a term of three years in prison.

M. R. Morden, M.D., Adrian, Mich.

[Comment.—The Journal is glad to have been of service in this instance. In the General News Department of this issue is an announcement concerning another man wanted for swindling. Perhaps our readers can help in this case also.—Ed.]

Corrosive Sublimate Poisoning by Means of Antiseptic Tablets.

To the Editor:—Cases of poisoning by corrosive sublimate were in the past comparatively rare, but in view of the sensational statements in the Walker case it is probable that there will be more cases of mercuric poisoning, suicidal or accidental, by these easily obtained articles. Therefore the publication of a few facts and also theories may not be out of place.

Since the newspaper reports appeared we have had two cases of poisoning by antiseptic tablets ($HgCl_2$) in our city. One patient died; the other was given calx sulphurata and the outcome has not yet been settled.

The general antidote appears to be white of egg, and it is of this we wish to speak first. It is true that on adding egg-albumin to a solution of corrosive sublimate the albuminate of mercury is formed, but the compound is not entirely insoluble in the gastric juice; further, the hydrochloric acid set free adds to the acidity of the gastric juice. Antiseptic tablets all contain citric acid, added to overcome the hardness and alkalinity of many waters. This further increases the solubility of the mercury albuminate or prevents the union of the mercuric base with the protein body. This can readily be proved by taking some egg-albumin, adding an equal part of water and shaking and dividing into two portions. To one add solution of mercuric chlorid and to the other artificial gastric juice (0.2 hydrochloric acid) about 1:4 and some solution made by dissolving an antiseptic tablet in water, and note the difference in the appearance of the precipitates.

Is mercuric albuminate non-toxic when rendered alkaline by the intestinal juices? This question seems out of place, but must be considered when the material leaves the stomach and enters the intestines.

Mercuric compounds are acknowledged to be toxic even in small doses; mercurous compounds can be tolerated in much larger doses; hydrogen sulphid reduces mercuric to mercurous, whether the conditions are acid or alkaline, even in the presence of citric acid, a substance which inhibits many chemical reactions. Calcium sulphid (calx sulphurata, U. S. P.), 1 gm. of which is capable of reducing 2.31 gm. of mercuric chlorid, hydrogen sulphid water, natural or artificial, which can be tolerated by the stomach, and enemas of which may be administered without serious danger, will all act in this manner, first reducing the mercuric chlorid to mercurous chlorid and further to mercurous sulphid.

On such grounds it would seem that the sulphids are the logical antidote for mercuric poisoning. Much work will have to be done on this, and we would not have published the unfinished work had not this matter been brought so prominently before the public by the press in the recent Walker case.

EDWARD H. HAYWARD, M.D., Detroit,
Director, Board of Health Laboratory.
W. H. ALLEN, PH.G., Detroit,
Dean, Pharmacy Department, D. T. Inst.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

WHY VACCINES INSTEAD OF SERUMS ARE GIVEN IN INFECTIONS

To the Editor:—In chronic infection, for example, rheumatoid arthritis following infection from any focus, the infection is combated by the tissues of the body in the production of antibodies for the purpose of neutralizing the toxin. A vaccine is given—why not a serum? Surely there are enough toxins in the patient to be a constant maximal stimulant in the production of all the antibodies that can possibly be made. Accepting this, how can a vaccine be of any value in stimulating the production of more antibodies when it is producing its maximal amount, and why does it not overwhelm the system with toxins? A serum contains these antibodies; why not add them to the blood?

R. C. B.

ANSWER.—Infections are roughly divisible into two classes: In the first class a true toxemia is produced which is met by the organism with the production of antitoxin. In these diseases the principal disturbances are caused by secretory toxic products which stimulate the formation of antitoxins. The main diseases of this kind are tetanus and diphtheria. In the second class reactions are produced by the proteins of the bacteria themselves, which call forth antibodies like the agglutinins, opsonins, bactericidal substances, etc. Infections of the first class are properly treated by antitoxins as in the case of diphtheria and tetanus. As a general rule, the other infections need immunizing bodies which as yet, at any rate, cannot be obtained regularly in therapeutic serums. To combat these infections an active immunity is necessary. In the chronic infections the bacteria are usually confined to a local focus from which toxic and other substances with antigenic powers reach the blood, but often not in sufficient quantity to excite the production of an active immunity. In such cases, if some of the bacterial substances be injected either into the subcutaneous tissue or into the blood, the organism is roused to the production of an active immunity which does not readily occur in response to the soluble substances which reach the blood from the infected focus. In other words, it is believed that there are not enough "toxins in the patient to be a constant maximal stimulant in the production of all the antibodies that can possibly be made."

TECHNIC OF ABDERHALDEN'S SERODIAGNOSIS FOR DEMENTIA PRAECOX

To the Editor:—I am very anxious to get a copy in English of Abderhalden's technic for serodiagnosis of dementia praecox. Where can I obtain it? R. R. IVEY, M.D., Tuscaloosa, Ala.

ANSWER.—The technic of Abderhalden's serodiagnosis for dementia praecox as worked out by A. Fauser is published in the *Deutsche medizinische Wochenschrift*, Dec. 26, 1912, and is based on the method of diagnosis for pregnancy. The technic of this method is published at some length in the April, 1913, number of *Surgery, Gynecology and Obstetrics.*

The essential of the method is the determination in the dialysate of the products of digestion of proteins. In pregnancy the serum contains ferments capable of digesting placenta or fetal products. These are therefore mixed, after thorough washing, with the serum and subjected to dialysis. If the dialysate shows the presence of products of digestion of proteins, the test is positive. In the test for dementia praecox the author used pulped-up testicles with some serums, on the theory that the affection is connected in some way with the presence of incompletely digested products from the sexual organs. In other cases he used brain tissues in the same way.

EXOSTOSIS OF OS CALCIS

To the Editor:—Please give me information regarding the surgical treatment of exostoses and "spines" occurring on the os calcis and causing painful and tender feet. Also give references to literature. It seems that this subject is badly neglected in our modern surgical text-books.

FREDERICK LONG, M.D., Bakersfield, Cal.

ANSWER.—Operation is always demanded in these cases to effect a cure. The incision (straight or curved) is made on the inner side of the foot, close to the sole and over the exostosis. The affected portion of the bone is exposed by dissection and the spur is removed with a chisel. The wound is closed without drainage.

Following are references to the literature:

French, H.: Exostosis of Os Calcis, *Practitioner*, London, July, 1910.
Griffith, J. D.: Osteophytes of Os Calcis, *Am. Jour. Orthop. Surg.*, February, 1911.
Davidson, A. J.: Exostoses of Os Calcis, *Therap. Gaz.*, April, 1911.
Colvin, A. R.: Bursae and Exostoses (Spurs of Os Calcis), *St. Paul Med. Jour.*, September, 1911.
Berry, J. M.: Exostosis of Os Calcis, *Albany Med. Ann.*, October, 1911.
Meisenbach, R. O.: Pathogenesis of Spur Formation on Os Calcis, *Am. Jour. Orthop. Surg.*, February, 1912.
Sever, J. W.: Apophysitis of Os Calcis, *New York Med. Jour.*, May 18, 1912.

POSTGRADUATE WORK ABROAD

To the Editor:—Can you give me information regarding study abroad? I want to know what courses are to be had in Berlin or Vienna and whether or not a knowledge of the language is essential. ROBERT B. STEWART, M.D., Topeka, Kan.

ANSWER.—These questions are fully answered in THE JOURNAL, April 12, 1913, pp. 1175-77, and at greater length in a reprint, a copy of which will be sent on receipt of 10 cents.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware: State Society and Homeopathic, Dover and Wilmington, June 17-19. Secretary of the Medical Council, Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

Iowa: Capitol Building, Des Moines, June 2-4; State University, Iowa City, June 5-7. Sec., Dr. Guilford H. Sumner, State House, Des Moines.

Kansas: Topeka, June 10. Sec., Dr. H. A. Dykes, Lebanon.

Kentucky: Armory, Louisville, June 3-5. Sec., Dr. J. N. McCormack, Bowling Green.

Louisiana: New Orleans, June 5-7. Sec., Dr. A. B. Brown, 108 Baronne St., P. O. Box 1060.

Maryland: Regular, 1211 Cathedral St., Baltimore, June 17. Sec., Dr. J. McP. Scott, Hagerstown; Homeopathic, Baltimore, June 13-14. Sec., Dr. O. N. Duvall, 1817 N. Fulton Ave.

Michigan: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

Minnesota: Pathological Laboratory State University, Minneapolis, June 3. Sec., Dr. Thomas McDavitt, Lowry Bldg., St. Paul.

Mississippi: Capitol Bldg., Jackson, June 3-4. Sec., Dr. E. H. Galloway.

Missouri: Gymnasium of St. Louis University, St. Louis, June 16-18. Sec., Dr. J. A. B. Adcock, Jefferson City.

New Jersey: Capitol Bldg., Trenton, June 17-18. Sec., Dr. H. G. Norton, 429 E. State St., Trenton.

New York: June 24-27. Chief of the Examinations Division, Harlan H. Horner, Department of Education, Albany.

North Carolina: Morehead-City, June 12. Sec., Dr. Benjamin K. Hays, Oxford.

Ohio: Columbus, June 2-5. Sec., Dr. George H. Matson, State House.

Pennsylvania: Harrisburg, Philadelphia and Pittsburgh, June 23-25. Sec., Mr. Nathan C. Schaeffer, Department of Public Instruction, Harrisburg.

South Carolina: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St.

Texas: Capitol Bldg., Austin, June 24-26. Sec., Dr. W. L. Crosthwait, Suite 1110 Amicable Bldg., Waco.

Virginia: Richmond, June 24-27. Sec., Dr. Herbert Old, Norfolk.

Wyoming: State House, Cheyenne, June 25-27. Sec., Dr. J. B. Tyrrell, Laramie.

Colorado April Report

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written examination held at Denver, April 1, 1913. The number of subjects examined was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 7, of whom 5 passed and 2 failed, including one osteopath. Thirteen candidates were licensed on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado	(1911) 82.8; (1912)	78.1, 81.7
Louisville Medical College	(1894)	75.3
Non-graduate		86.6

FAILED

Nagasaki Medical School, Japan	(1906)	31.9

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
Georgetown University	(1911)	Dist. Colum.
Rush Medical College	(1903) Illinois; (1912)	Kansas
Northwestern University Medical School	(1911) (1912)	Illinois
Keokuk Medical College	(1895)	Iowa
Johns Hopkins University	(1909)	Oregon
University of Michigan, Dept. of Med. and Surg.	(1903) (1911)	Illinois; Michigan
	(1898)	Illinois
Marion-Sims College of Medicine	(1890)	Illinois
University of Buffalo		New York
University and Bellevue Hospital Med. College	(1903)	Ohio
Western Pennsylvania Medical School	(1891)	

The following questions were asked:

ANATOMY

1. Describe the upper end of the tibia. 2. Name the bones of the carpus and describe one of them. 3. Describe the temporomaxillary articulation. 4. Name the muscles attached to the radius. 5. Give the origin, insertion and nerve supply of the following muscles: masseter; tensor vaginae femoris; diaphragm; soleus; sternomastoid. 6. What spinal nerves enter into the formation of the anterior crural nerve and what muscles does it supply? 7. Give a brief description of a cross-section of the spinal cord in the cervical region. 8. What are the relations of the right kidney? 9. Name the valves of the heart and describe one of them. 10. Describe the prostate gland.

PHYSIOLOGY

1. What purpose is served by the valves in the veins, and where are they most generally placed? 2. (*a*) Describe respiration and what keeps it going. (*b*) What is its object? Define complemental, reserve and residual air. 3. Describe the location at which the different heart sounds can be heard the plainest and tell what produces each sound. 4. Why does the normal temperature of the body remain the same during cold and warm weather? 5. What are the principal morbid effects of division of the fifth cranial nerve? 6. Give the origin, shape, size and functions of the white corpuscles. 7. What are starches, how, when and where digested and carried into the circulation? 8. Distinguish serous from mucous membrane, give example of each. 9. Describe the construction of the eye, and give the physiology of vision. 10. Mention the various methods of eliminating waste products of the body.

CHEMISTRY

1. Define and give examples of (*a*) organic chemistry; (*b*) inorganic chemistry. 2. Give the formula, preparation, and a test for nitrate of silver. 3. Give the sources of oxygen, and its relation to combustion and to life. 4. What are aldehyds? Give their properties and principal derivatives. 5. Give the general properties of alkaloids. 6. Give an explanation of the formation of ammonia in the urine. 7. Give two chemical tests for blood. 8. Define bilirubin, with test for its presence. 9. Give test for excess of hydrochloric acid in gastric contents. 10. How is an excess of urates determined?

PATHOLOGY

1. Give a description of adenocarcinoma under the microscope. 2. Describe *Bacillus diphtheriae*. 3. Exclusive of changes in the intestine, what is the morbid anatomy of typhoid fever? 4. What conditions result from disease of the pituitary body? 5. Name some of the common fluids used for hardening tissues preparatory to section, with the strength ordinarily used. 6. Describe the phenomenon known as inflammation. 7. Give the morbid anatomy of acute endocarditis. 8. Describe the morbid anatomy of acute lobar pneumonia. 9. Discuss the cause of death from burns. 10. Discuss anaphylaxis.

SURGERY

1. Describe the fractures of the elbow and the method of examination. 2. Give the symptoms and diagnosis of fracture of the surgical neck of the humerus. 3. Give the symptoms and complications of fracture of ribs. 4. Define toxemia, septicemia and pyemia. 5. Give the symptoms and causes of a subphrenic abscess. 6. Give the symptoms and diagnosis of tuberculous arthritis. 7. Give the symptoms and etiology of varicose veins. 8. What are the causes and symptoms of acute intestinal obstruction? 9. Describe the symptoms of abscess of the liver. 10. Discuss benign and malignant tumors of the breast.

OBSTETRICS

1. Name possible sources of puerperal hemorrhage and treatment of each. 2. What would lead you to suspect extra-uterine pregnancy? 3. In breech presentation describe the different methods of delivering the after-coming head. 4. You are called on to take care of a woman in labor; describe how you would proceed to sterilize your own person. 5. Give symptoms of rupture of the uterus. 6. How may you prevent perineal lacerations? 7. Outline treatment for the prevention of ophthalmia neonatorum. 8. Write two pages on the preventive treatment of eclampsia. 9. Give the treatment of eclampsia. 10. Give the mechanism of L. O. A.

TOXICOLOGY

1. If you were called in to a case with the following symptoms what would be your diagnosis as to cause? Immediate loss of muscular power; giddiness, person staggers and falls to the ground; respiration hurried and gasping; pupils dilated and insensible to light; eyes glassy and protruding; extremities cold, and sometimes convulsions; breathing performed in sobs; face pallid; jaws spasmodically closed; frothing at the mouth; death occurs by violent convulsions. 2. Having thus diagnosed the above case, what would be your treatment if you saw case before death? 3. What do you understand by neurotic poisons? Explain. 4. What are the symptoms? 5. Give symptoms of poisoning by chloral hydrate. 6. Treatment and post-mortem appearances. 7. Give symptoms of one asphyxiated by burning charcoal. 8. Give post-mortem appearances. 9. Give symptoms of one poisoned by oxalic acid. 10. Give treatment of one poisoned by oxalic acid.

SYMPTOMATOLOGY

1. Describe vesicular breathing; contrast it with bronchial breathing; tell where each may be heard in health; what is the significance of bronchial breathing in an area in which vesicular breathing is normal? 2. What are the causes, symptoms and signs of purulent pleurisy? 3. Name the animal parasites of man, and tell what symptoms they cause and how their presence is proved. 4. What are the causes of hematemesis? How is it distinguished from hemoptysis? 5. Describe the symptoms and complications of scarlet fever. 6. Give the symptoms, complications and diagnosis of cerebrospinal fever. 7. What is natural immunity? Acquired immunity? Discuss the nature of immunity. 8. Give the symptoms of arthritis deformans. 9. What are the causes, symptoms and physical signs of dilatation of the stomach? 10. What is the symptomatology of acute endocarditis?

Book Notices

Guide to Midwifery. By David Berry Hart, M.D., F.R.C.P.E., Lecturer on Midwifery, School of the Royal Colleges, Edinburgh. Cloth. Price, $6 net. Pp. 765, with 268 illustrations. New York: Rebman Company, 1912.

The plan of this book differs from that usually followed in text-books for students or general practitioners. The work is divided into two parts. The material ordinarily used in obstetric teaching occupies most of the first part. In the second part are elucidations of difficult points and summaries of new operations and of views and theories which might distract the reader, especially a novice, in a first study of a subject.

The author says that the weak point in many hard-working students is that they know the verbal and not the actual. The volume has been prepared partly with the idea of overcoming this fault. Hence the various subjects are treated briefly and succinctly. The chapters are short but numerous, the text is clear, and the paragraphs are introduced by bold-faced type. The necessary facts of obstetrics are presented in a first series of twenty chapters. These include such fundamental topics as the bony pelvis, topographic anatomy, menstruation, ovulation, the changes occurring in the pregnant uterus and the development of the embryo, placentation, the symptoms and signs of pregnancy and its differential diagnosis, normal labor in its various phases, and its management. Breech, occipito-posterior and face presentations are classified as borderland cases, as is also multiple conception.

The pathology of pregnancy occupies eight chapters and includes ectopic gestation and the pathology of the placenta and its membranes. Abnormal labor is particularly well presented for so brief a text from the point of view of three etiologic factors: faults of the uterus, of the child and of the elastic structures and bony pelvis. Operative obstetrics is presented with respect to the most recent technical advances. The final chapters in this portion of the work are devoted to the puerperium and its pathology, with some space given to the infant and natural and artificial methods of feeding. As intimated the second part is unique.

An interesting chapter here is that on "Evolution in Obstetrics," in which Darwinism, Weissmannism and Mendelism are discussed in relation to practical points. The various theories of eclampsia are likewise excellently presented. The author expresses the opinion that theoretically a book on midwifery is better without illustrations at all, the student having access to laboratory and museum. This not being practicable, he has interspersed his text with excellent drawings, many reproductions of the masterpieces of Zweifel, Bumm and Nagel. A bibliography, not complete but giving all most modern references, is found at the end of the volume. Altogether, this new text is another concrete expression in classic form and characteristic racial brevity of the Edinburgh school of midwifery.

Glycosuria and Allied Conditions. By P. J. Cammidge, M.D. Cloth. Price, $4.50 net. Pp. 467. New York: Longmans, Green & Co., 1913.

Two facts are impressed on one in examining a modern work on diabetes like Cammidge's comprehensive work. The first is the complexity of the chemical problem involved in the etiology, diagnosis and treatment of glycosuria. As the author states, glycosuria is essentially a chemical problem, and hence he approaches it primarily from the chemical side. A large section is devoted to a study of the nature of the carbohydrates and the tests, both qualitative and quantitative, by which the presence and degree of glycosuria are recognized. This section occupies 120 pages.

The other striking fact is the disappearance of distinctions between the milder forms of glycosuria and the severer forms usually classed as diabetes. The one grades into the other by such insensible degrees that a common pathogenesis and common principles of treatment may be applied to all cases. The chemical consideration of the subject is very thorough, and is followed by an account of experimental glycosuria and the milder forms of transient glycosuria. The relation of glycosuria to internal secretion receives the attention which it deserves from the results of recent investigations.

Persistent glycosuria, or diabetes proper, forms the largest section of the book. The author seems to adhere to the theory that glycosuria is due to the access of a superabundance of sugar to the blood, as maintained by von Noorden and others, rather than to a deficient power of utilizing the sugar supplied. This necessitates abandoning the view that diabetes is a distinct disease, and looking at it as a symptom-complex which may be brought about by various agencies.

Naturally, from his previous studies, the author's interest is largely centered in the relation of the pancreas to diabetes, and he gives much space to the methods of diagnosing disease of the pancreas, in which his "pancreatic reaction" figures quite prominently. By this means he has examined the urine in 168 cases of diabetes and obtained a positive result, indicating that the disease was due to a lesion of the pancreas, in 72 per cent.

The dietetic treatment is constructed on the usual lines, good directions being given for the ascertaining of tolerance and the regulation of the proportions of protein, carbohydrates, etc. The author very properly warns against accepting without careful investigation the claims made for the various diabetic flours and breads on the market. Rather more credence is given to the claims made for pancreatin, taka-diastase, papain, etc., than the evidence seems to warrant.

Drug treatment receives a somewhat extended notice without advocacy of any particular remedy. The author suggests that the varying success which results from the employment of such a variety of drugs confirms the view that diabetes is not a disease, but a series of symptoms which may arise from a variety of causes.

The book closes with chapters discussing the appearance of other forms of sugar in the urine, the nature of alkaptonuria and diabetes insipidus, and an appendix giving the general properties and reaction of the sugars and related substances.

The book forms one of the most comprehensive treatises on this very important subject.

The Internal Secretory Organs: Their Physiology and Pathology. By Prof. Dr. Artur Biedl, with an Introductory Preface by Leonard Williams, M.D., M.R.C.P. Translated by Linda Forster. Cloth. Price, $6 net. Pp. 586. New York: William Wood & Co., 1913.

The subject of the internal secretions is not only one of the most interesting but also one of the most important subjects in modern medicine. The complex animal body is not simply an agglomeration of organs working independently of each other, but the functions of all the organs are related and correlated for the benefit of the whole. This regulation of function is brought about primarily by the so-called internal secretions which are themselves the products of certain organs. The great importance of these internal secretions is constantly becoming more apparent with the growth of our knowledge concerning them; and while little more than a beginning has been made, sufficient is known to show that it is impossible for any physician to be abreast of the times who is not familiar with the work done along this line. The author of this book has long been foremost in work and thought in this interesting field. The entire subject of the internal secretions is comprehensively discussed from the points of view of the physiologist, the pathologist and the therapeutist. The internist and the surgeon alike will find much of the greatest value in a careful study of this work. The translation into English has been well done, retaining the strict meaning of the original German without harshness of expression.

The Treatment of Infantile Paralysis. By Oskar Vulpius, M.D., Professor Extraordinary at the University of Heidelberg. Translated by Alan H. Todd, M.B., B.S., B.Sc. (Lond.), House Surgeon, Guy's Hospital. With Introduction by J. Jackson Clarke, M.B., (Lond.), F.R.C.S. Cloth. Price, $4 net. Pp. 318, with 243 illustrations. New York: William Wood & Co., 1912.

This is the largest and most complete treatise in English on infantile paralysis. It will be of interest to the general surgeon as well as to the orthopedic surgeon, since its chief aim is to describe and illustrate the surgical treatment of the deformities due to anterior poliomyelitis. Twelve pages are devoted to apparatus, and 253 to the surgery of paralysis. The book is abundantly illustrated from the author's extensive material, and his views are clearly and forcibly expressed. Many Americans will disagree with certain of his opinions, as, for instance, that a transplanted tendon should almost invariably be attached to the paralyzed tendon whose function it is to assume (Lange and his followers holding that attachments to periosteum or bone are more logical and successful); or, again, that neuroplasty should be performed in suitable cases six months after the onset of the paralysis; or that arthrodesis of the ankle may properly be performed in children as young as 8 years. The author also believes that partition of function is possible; that, for example, the gastrocnemius may be split longitudinally into two separate muscles, either of which will be capable of acting as a dorsal flexor of the foot if properly attached, while the other half remains a plantar flexor.

Thirty-two pages are devoted to nerve transplantation, with the conclusion that as yet the results are too uncertain for its employment in any but exceptional cases. Artificial silk ligaments, boiled in corrosive sublimate, as used extensively by Lange and many others, are not advocated by Vulpius with any degree of warmth. His criticism of Whitman's operation for pes calcaneocavus is not competent, since ankylosis is neither produced nor desired in this operation. It is perhaps to be regretted that the actual operative technic of some of the author's procedures is not shown in greater detail by photograph or diagram and by more minute description. The book is well produced, and is to be recommended highly to those interested in this kind of surgery.

DIET AND HYGIENE IN DISEASES OF THE SKIN. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital. Cloth. Price, $2 net. Pp. 194. New York: Paul B. Hoeber, 1913.

The average practitioner is fairly well prepared to treat diseases of the skin with up-to-date methods so far as applications go. The important theme in medicine to-day is prevention, and many an obstinate skin affection can be eradicated only by the removal of some underlying systemic condition partly through medicine and oftener through diet and hygiene. As a treatise on this subject, Dr. Bulkley's book will be welcomed. It is clear, sane, helpful. It represents his careful observation, study and deduction. The details of special diet and the tables will be of practical service, and the bibliography will aid those who wish to read further.

DIABETES: ITS PATHOLOGIC PHYSIOLOGY. By John J. R. MacLeod, M.B., Ch.B., D.P.H., Professor of Physiology, Western Reserve University, Cleveland. Cloth. Price, $3 net. Pp. 224. New York: Longmans, Green & Co., 1913.

This is a contribution to the theory of diabetes from the chemical and experimental side which aims to put clearly before the reader the source of the sugar of the blood and the manner in which it is produced and destroyed. The methods of chemical analysis are well described and the action of the nervous system, of the ductless glands and particularly the process of glycogenesis, are described. The probable cause of hyperglycemia and the occurrence and explanation of the formation of sugar from fats and proteins (glyconeogenesis) are discussed. While the book is excellent in its sphere, it must be noted that no discussion of the symptoms or treatment of diabetes is attempted.

THE MEDICAL DISEASES OF CHILDREN. By T. R. C. Whipham, M.A., M.D., M.R.C.P., Physician to the Evelina Hospital for Sick Children. London Medical Publications. Cloth. Price, $3.75. Pp. 417, with 67 illustrations. New York: Oxford University Press, 1912.

This is an interesting presentation, in rather condensed form, of information on the medical side of the diseases of children. In a brief work for easy and frequent consultation, one would particularly desire helpful suggestions in the way of management and treatment. In this respect one is liable to be disappointed with the volume. It is well printed and abundantly illustrated, but poorly bound.

Medicolegal

Liability under Contract to Furnish Services of a Particular Surgeon in Case Left to His Assistant

(McDaniel vs. United Railways Co. of St. Louis (Mo.), 148 S. W. R. 464)

The St. Louis Court of Appeals affirms a judgment for the plaintiff for damages from an alleged breach of contract made for the defendant by its claim agent to furnish the plaintiff the services of a certain surgeon possessing peculiar skill and ability for the treatment of her injury, which was received through the negligence of the defendant. The court holds, too, that the contract could be proved by oral evidence notwithstanding a contemporaneous writing between the parties remotely touching on the subject-matter.

The court was not impressed with the argument that a verdict should have been directed for the defendant because it appeared that it furnished the services of the promised surgeon, who occasionally visited the room in which the plaintiff was confined in the hospital. The court says that this argument involved the idea that the contract was one which might be performed by another surgeon in the promised one's employ. It appeared that though the plaintiff had suffered an intrascapular fracture of the surgical neck of the femur, which is a most difficult injury to successfully treat, the promised surgeon at no time assumed personal charge of the case. Instead, a young physician in his employ, who had been in practice but three years, attempted to set the bone and adjust and maintain a Hodgen splint in proper position. It was not enough that the promised surgeon dropped into the plaintiff's room frequently while she was confined in bed and inquired as to how she felt, and on several occasions laid hold of the rope passing from the ceiling by which the plaintiff's foot was suspended, and on one occasion passed his hand over the plaintiff's hip in near proximity to the fractured bone. There can be no doubt that there are undertakings in which one party contracts for the personal services of another for his skill, knowledge and experience. When, therefore, it appears the contract stipulates that the services shall be rendered by some particular person, possessing peculiar knowledge and skill with respect to the undertaking, because of the peculiar knowledge, skill and experience of such person, it implies the services are to be personally rendered and that the performance may not be delegated to another. It was competent for the jury to find that the contract required the defendant to furnish the plaintiff with the personal services of the promised surgeon, and not his inexperienced assistant, in an endeavor to bring the ends of the fractured femur in apposition, adjusting the Hodgen splint and the subsequent treatment thereabout.

Nor does the court agree with the contention that though the promised surgeon did not personally perform the duties, in compliance with the obligation which the defendant assumed in the contract, the plaintiff was nevertheless precluded from a right of recovery as for a breach because she accepted the services of his assistant as and for compliance therewith. In those cases where such principle properly obtains there always appears the element of voluntary acceptance. Every precept of natural justice repelled the suggestion that the facts here in judgment invited the application of that principle, to the end of denying the right of recovery as a conclusion of law. It may have been proper enough to submit this theory to a jury for a finding thereon to the effect that the defendant had discharged the contract, if it be found that plaintiff had voluntarily accepted the services of the assistant, instead of the promised surgeon, as a full compliance therewith. But no such issue was framed in the case by instructions, and it is certain that the court may not declare such a result as a conclusion of law. It appeared that the plaintiff was on her back, confined in a hospital of the defendant's choosing, with a fracture of the femur, and her limb suspended in a sling attached to the ceiling. The proof was that she suffered intense pain throughout the entire period and was entirely helpless. She inquired several times for the promised surgeon and was assured that she was all right. Certainly she was not competent to judge as to whether or not her fractured bone was properly set and the process of healing going forward, and, no doubt, she supposed proper treatment was had and obtained throughout. It would be a harsh judgment indeed to assert, as a conclusion of law on these facts, that the plaintiff's right of recovery was precluded for the reason that she voluntarily accepted the substituted services of the assistant for those to be performed by the promised surgeon.

Neither could it be held that a verdict should have been directed for the defendant because the damages sued for were so uncertain of ascertainment as to enter the realm of mere conjecture. This argument furnished the court a subject for much reflection and considerable anxiety as to a proper solution of the question presented. In considering it, however, it should be remembered that the requirement that the damages must not be uncertain is satisfied by a reasonable certainty in this respect. In other words, it is sufficient if there be such certainty thereabout as satisfies the mind of a prudent and impartial person that the damages sued for may be traced as a reasonable probability to the breach of the contract. Then, too, the law, it has been well said, never insists on a higher degree of certainty than the nature of the case admits. In almost every case the damages to be measured are more or less uncertain, to a considerable degree; but the question of uncertainty presented here related to the cause of the damage rather than to uncertainty as to the measure or extent thereof. Therefore, if it might be said that the facts and circumstances in evidence were insufficient to suggest to a reasonably prudent, impartial man that the damages proved flowed as a reasonable probability from the defendant's breach of the contract, the argument was sound; otherwise, the question was one for the jury.

The court believes that it was competent for the jury to infer that, had the plaintiff been treated by the promised surgeon instead of the assistant, a proper union of the bone would have taken place, for, if the evidence on her part was to be believed, her health and condition were most favorable to such a result. And though it be true that in suits for the breach of contract the damages should be traceable to the breach and appear to flow from it as a reasonable probability, it is not essential that they be shown as a certainty to follow from that cause. It will suffice if enough appears in the case to enable the jury to reckon such a result from the common experiences of life through the application of that degree of sense usually possessed by an impartial man of ordinary prudence. The court, however, has been unable to find a case in point.

Exhibitions of Person Where No Injuries Visible—Medical Works as Evidence

(Landro vs. Great Northern Railway Co. (Minn.), 135 N. W. R. 991)

The Supreme Court of Minnesota says that it is not to be understood as giving its approval to the exhibition of the plaintiff's person before the jury, and the experiment made to show the presence of symptoms claimed by his experts to indicate a dislocation or partial dislocation of the sacro-iliac joint, including groans by the plaintiff. It is within the discretion of the trial court to permit a plaintiff in a personal injury case to exhibit his injuries to the jury, in order to show their extent or to enable a surgeon to demonstrate their nature and character. It is also discretionary to permit tests and experiments in the presence of the jury in a proper case and under proper safeguards. But where there are no wounds, no injuries that can be seen by the jury, it is improper to permit the exhibition of the plaintiff's person for the purpose of conducting experiments to prove that he will cry out with pain, or that his muscles will grow rigid, when his legs are manipulated in a certain manner. It was a hotly disputed question whether the plaintiff had any "objective" symptoms; but it was quite clear that he had none that could be seen by the jury. Trial courts should always exercise this discretion with caution, and when it appears that the probable effect of the exhibition will be, not to instruct the jury as to the nature and extent of the injuries, but to excite their sympathies or inflame their passions, it should not be permitted.

Medical books, however celebrated their authors, are not admissible in evidence, because the author is not under oath and not subject to cross-examination. But, for the purpose of testing the qualifications as well as the credibility of an expert, it is generally held that when the witness has testified that the authorities support his view, he may be asked on cross-examination whether a medical work, admitted by him to be a standard authority, does not express a contrary view. And it is no objection to such cross-examination that incidentally the opinions of the author are thus brought before the jury. Theoretically the author's opinions are not substantive evidence, but are merely impeaching evidence.

Society Proceedings

COMING MEETINGS

American Medical Association, Minneapolis, June 17-20

American Academy of Medicine, Minneapolis, June 13-15.
Amer. Medico-Psychological Assn., Niagara Falls, Can., June 10-13.
American Proctologic Society, Minneapolis, June 16-17.
Maine Medical Association, Portland, June 25-26.
Massachusetts Medical Society, Boston, June 10-11.
New Jersey Medical Society, Spring Lake, June 10-12.
North Carolina State Medical Society, Morehead City, June 17.
Rhode Island Medical Society, Providence, June 5.
Washington State Medical Association, Everett, July 14.

MEDICAL ASSOCIATION OF GEORGIA

Annual Meeting, held in Savannah, April 16-18, 1913

Under the presidency of DR. W. W. PILCHER, Warrenton.

Officers Elected

For a list of the newly elected officers see THE JOURNAL, May 3, p. 1368.

Treatment of Pneumonia

DR. J. W. PALMER, Ailey: Every case of pneumonia is a law unto itself. Certain symptoms in each case will call for special therapeutic measures. Do not give any more stimulants than necessary. If the heart does not respond to digitalis, use strychnin and epinephrin. Camphor should be used if there is restlessness or delirium. Be sure and keep the bowels open. For pain or cough, give morphin or codein, subcutaneously, but do not give cough mixtures. I have no confidence in venesection, or in the use of antipneumococcic serum or mixed vaccines. Sufficient ventilation and absolute quiet are absolutely necessary.

DISCUSSION

DR. DANIELS, Savannah: My experience has been that the best indication in the treatment of pneumonia is the blood-pressure. So long as this is 1 per cent. in millimeters, of the heart-beats per minute, the patient is doing well. The best stimulant of all is cold air. When the abdomen begins to get tympanitic and the patient has distressed breathing and bad heart-action, washing out the stomach with sodium bicarbonate solution will often give relief and tide the patient over a critical period.

DR. CLAUDE A. SMITH, Atlanta: My experience has led me to the conclusion that the old-fashioned fly-blister is the best counterirritant we can use. In the congestive stages, when there is a high-bounding pulse, there is nothing better than veratrum. Watch it closely, however, and when the pulse is reduced to about normal, withdraw it.

DR. MALCOLM L. CURRIE, Vidalia: The first thing needed in pneumonia is to stimulate the liver and open the bowels. For the nervous excitement, etc., I give a prescription containing small doses of tartar emetic and morphin, small doses of tincture of aconite and gelsemium, and ammonium carbonate and chlorid, with syrup of wild cherry. I am not satisfied to treat a patient with pneumonia and not use blistering.

Dr. W. B. Hardman, Commerce: A blister seldom does much good in lobar pneumonia; in fact, I think that we are deceived concerning the good we do with our remedies. Most young patients—children and young adults—will recover if you do very little for them. Give plenty of rest, plenty of fresh air and keep them quiet.

Dr. L. C. Fisher, Atlanta: The one thing that has impressed me most in the treatment of ether pneumonia has been fresh air, together with care of the blood-pressure. When I have surgical pneumonia patients I put them on the roof-garden.

Dr. L. C. Allen, Hoschton: I do not approve of opium in pneumonia, as it locks up the secretions and causes nausea, producing paresis of the bowels. Besides, opium is decidedly a respiratory depressant; and in pneumonia we already have labored breathing.

Dr. H. H. McGee, Savannah: The best remedies, outside of food, are hot and cold water and fresh air. The intestinal tract should be kept open. I wish to protest against the use of depressants in pneumonia. The heart is burdened enough and it needs supportive treatment and not depression.

Dr. Stewart R. Roberts, Augusta: Gibson, in Edinburgh, said that as the patient gets worse, the blood-pressure becomes lower and the pulse-rate rises. In a young person of 20 years, with a strong, massive frame, I can conceive that a little aconite would help the patient, but only for a day or two. A little venesection might also help. To say, however, that in every case of pneumonia one should give aconite or resort to bleeding is not wise. If I had to choose between medicine and fresh air in a case of pneumonia, I would throw the medicine away and give the fresh air.

Pasteur Treatment of Rabies

Dr. C. D. Greer, Atlanta: I have treated 1,107 cases, having personally administered at the laboratory the full course of treatment to about a third of the human patients, which necessitated giving over 7,500 hypodermic injections. Among these, only one abscess was produced. Out of these cases there have been only three deaths. In each instance the disease developed between the fourteenth and the seventeenth days of the treatment. The patients had severe face injuries, which are the most dangerous and those from which practically all the deaths result.

DISCUSSION

Dr. T. Byron King, Sandersville: If a wound is treated properly immediately after infection, is it absolutely necessary for the Pasteur treatment to be given?

Dr. J. G. Dean, Dawson: We have treated twelve cases of hydrophobia with serum obtained from the state fresh every day; but there is an impression prevailing among the people that the heads of the dogs suspected of having the disease have not been carefully examined by the State Laboratory, possibly because every dog whose head was sent there has been pronounced as having had hydrophobia.

Dr. Virgil O. Harvard, Arabi: Last year a dog in our town bit three or four other dogs before it ended its career. I sent its head to the State Laboratory and the next day I received a telegram that Negri bodies had been found. I prevailed on the people to shut up the dogs that had been bitten by the first one. This was done and all remained well.

Dr. M. J. Johnson, Waycross: If after a child is bitten the question arises as to whether or not the dog is rabid, the dog should be properly caged and watched for ten days. If it finally becomes necessary to treat the patient we have still a sufficiently long time, as I understand it, in which to do so.

Dr. Claude A. Smith, Atlanta: I was associated for two years with the giving of the Pasteur treatment, and our patients came from all over the South, especially from Louisiana. At that time the Negri bodies were not known. I advocate having this treatment provided free in every state. In the attempt to answer the question, When does a dog have rabies? I inoculated dogs, cats and other animals with the material obtained from known cases of the disease; and I was impressed with the fact that no one could tell this by merely looking at the animal. Although all those inoculated developed the symptoms on the fourteenth day, one would often have to nag and worry the animals before they would attempt to bite. Dogs often have hydrophobia when the fact is not suspected, as they do not bite any one.

Dr. H. F. Harris, Atlanta: I am not the one to make the examinations personally in the State Laboratory, but my instructions have been—particularly in connection with the matter of rabies—that the examinations be made always in the most careful manner and as soon as possible. Our ability to determine the presence of rabies by the existence of Negri bodies or by any other means is limited. While it is believed to be the case that when the Negri bodies are found in the nerve-cells, rabies exists, instances are found in which these bodies are not obtained on examination, yet in which, if we take the brain substance and inoculate it into animals, these animals develop the disease. Therefore the presence of Negri bodies does not afford a final and definite diagnosis. There are but few things in medicine that are absolutely fast and fixed. A dog is not necessarily healthy because a person says that it is playful, and beyond a doubt the examination for Negri bodies, when positive, is of more value than the opinion of any person. As hydrophobia is a disease from which probably no one has ever recovered, it would be atrocious to examine the head of a dog and say that the animal was all right, and then have the unfortunate victim later develop the disease; therefore it is necessary for us, even in doubtful cases, to say that the diagnosis is positive. There is no harm done by this preventive treatment, and there is always the possibility of the saving of a life by its means.

Chronic Nephritis: Dietetics and Treatment

Dr. R. F. Wheat, Amsterdam: All cases of nephritis are due to the production or accumulation of an abnormal substance that acts like an acid. Medication should be employed as needed. Confine the patient to bed in a recumbent position till the symptoms of edema and circulatory disturbances have disappeared. All measures should be avoided which cause marked fluctuations in the blood-pressure. I mention an absolutely milk diet only to condemn it in all cases in which the uremic symptoms are alarming. A salt-free diet causes the edema to decrease rapidly. Patients should not take over 35 ounces of fluids daily, if there is a tendency to dropsy. If the dropsy is very great, aspirate the fluid off from the peritoneal cavity.

Rest in Nephritis

Dr. H. F. Harris, Atlanta: In complete rest, we require only half the nourishment we need when engaged in active exercise. The kidneys are probably rested to a corresponding degree with the amelioration of any irritation existing within them. In a number of cases, I have had very good results from treatment by means of long-continued rest. In the beginning an absolute milk diet is always advised; but later, six or eight raw eggs, without salt, may be given. This treatment usually lasts eighteen months. Patients may have all the water they wish. Drugs have but little place in this treatment which, if persisted in, will finally make the patients, to all intents and purposes, well.

DISCUSSION

Dr. W. R. Houston, Augusta: It is unwise to put more work on the kidneys than they can do; but, of course, if it can be shown that a milk diet is preferable, I am in favor of it. Musser of Philadelphia advised eighteen months in bed.

Dr. C. L. Williams, Columbus: During the past year I have had four or five cases of Bright's disease. The first patient was 65 years old. I put him on the rest cure and a liquid diet and gave him strontium lactate. After doses of from 45 to 60 grains of this drug for two or three days, he had no albumin in the urine and got up and went about. He was greatly improved for several months by this treatment, but through carelessness in his diet, he developed uremia and died. I used strontium lactate in all these cases with good results.

DR. R. H. STOVALL, Macon: I wish to call attention to the need of care in the use of mercury in these kidney cases.

The Criminal Insane

DR. E. M. GREEN, Milledgeville: A hospital for the insane should not be burdened with a number of criminals. Of forty-six criminal persons who were admitted to the state sanatorium since January, 1910, seven were not insane. The study of these cases suggests the possibility of predicating the class of crime which sufferers from certain psychoses are liable to commit.

DISCUSSION

DR. E. BATES BLOCK, Atlanta: The theory of insanity is too often used to obtain the release of some person accused of crime. It is a mistaken idea that the criminal insane should not be punished. People who are so insane that they want to kill others ought to be put in a place where they cannot do so, and yet not into ordinary asylums. We should have in every state a criminal insane asylum where the criminal insane would have to serve out their sentence the same as they would in a penitentiary, if they were not insane.

DR. J. W. MOBLEY, Milledgeville: The confinement of the criminal insane in hospitals for the insane, when no other provision is made for them, is wrong. They are a discordant element. We cannot control them as we do the other insane persons. Ninety per cent. of the criminal insane really know that they have committed a crime and are more or less amenable in the sight of the law. Then there are those who come to the asylum to pass over a period of time until the feeling against them in the community dies out. These are often not insane but have put in a plea of insanity to escape the punishment of some crime by the law. While nearly all criminals are defective, we cannot accept that as a reason for sending them to the state sanatorium.

Treatment of Typhoid Hemorrhage

DR. THOMAS D. COLEMAN, Augusta: In typhoid hemorrhage a hypodermic of morphin is usually indicated. Attention should be directed to quieting peristalsis by withholding food and administering drugs which, in passing down the intestinal tract, tend to keep down fermentation and constrict bleeding vessels. After the danger of recurrence is passed, the ordinary typhoid diet may be resumed. I have used various preparations of the adrenals with satisfactory effect in constricting the blood-vessels. I have not been so successful with the use of gelatin and calcium chlorid alone in increasing the coagulability of the blood.

DISCUSSION

DR. L. C. ALLEN, Hoschton: In a number of cases I have had excellent results from the use of calcium chlorid in 10-grain doses every three hours.

DR. CLAUDE A. SMITH, Atlanta: Nothing has served me so well in the treatment of typhoid hemorrhage as the use of hypodermic injections of morphin and morphoid tincture of iodin, combined with ergot. It is of the utmost importance that we obviate every condition that has a tendency to irritate the bowels.

Bacterial Vaccines in Acute and Chronic Affections

DR. LEWIS M. GAINS, Augusta: Judging from the experience which I have had with bacterial vaccines, I believe that the physician who does not use them in acute and chronic affections is not doing justice to either the patient or himself. Acute infections respond more readily to vaccines than do chronic, and surface infections than those in which the infecting agent has penetrated into the depths of the tissue. I have treated successfully with stock vaccines cases of erysipelas, common colds, typhoid and scarlet fever. I have had no trouble in regard to reactions following the administration of the vaccines. It is my firm belief that in vaccine therapy we have one of the strongest weapons against acute and chronic infections.

DISCUSSION

DR. C. W. GOULD, Atlanta: With regard to the use of streptococcus vaccines in erysipelas, I think that you could get even better results with the streptococcus serum. I know of at least two cases of erysipelas in which the patients did not recover after treatment with streptococcus vaccines, but who were cured by the streptococcus serum. I have given typhoid vaccines as a prophylactic measure for a fever of 102 F.

DR. E. G. BALLENGER, Atlanta: The polyvalent vaccine is of prime importance in gonorrheal conditions. The troublesome feature of gonorrhea is secondary infection. If we give the mixed vaccines during the acute condition, we are less likely to have troublesome mild chronic infection later.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-Eighth Annual Meeting, held at Washington, D. C., May 6-8, 1913

The President, DR. HENRY C. COE, New York, in the Chair

Officers Elected

The following officers were elected for the ensuing year: president, Dr. J. Whitridge Williams, Baltimore; vice-presidents, Dr. Thomas J. Watkins, Chicago, and Dr. Howard C. Taylor, New York; secretary, Dr. Leroy Broun, New York (reelected); treasurer, Dr. J. Wesley Bovee, Washington, D. C. Boston was selected as the place of the next annual meeting, in 1914.

Uterine Inertia; Its Treatment

DR. GEORGE TUCKER HARRISON, Charlottesville, Va.: When the uterine muscle shows feebleness in the beginning of labor and during dilatation, this condition of atony is called primary uterine inertia. The cause may be either anatomic changes in the uterine muscle or disturbed innervation. Secondary inertia is a condition of exhaustion which comes on during the period of expulsion from various causes. Before rupture of the membranes in primary inertia there is no indication for active intervention. After rupture, if there is danger to life of the child from the discharge of liquor amnii, or the mother's life is imperiled from danger of septic infection, dilatation should be brought about by the metreurynter (rubber bag), and version followed by extraction. In secondary inertia, a too-protracted labor is dangerous to the mother and child, and active intervention is indicated; if the head is well down in the pelvis and resting on the perineum, application of the forceps is indicated. It has recently been proposed to perform cesarean section in certain cases of uterine inertia, especially in the interests of the mother. The obstetric resources at our command are amply adequate, and there is no indication for such operative procedure in inertia *per se*. In primary inertia, a combination of morphin, atropin and strychnin often has an excellent effect when given hypodermically. After dilatation pituitary extract has found favor with some obstetricians. The exact field of application awaits further investigation.

Pituitary Extract in Uterine Inertia

DR. J. CLIFTON EDGAR, New York: I wish to report seventy cases, hospital and private. They include, in the first and second stages of labor, thirty-nine cases; immediately after the third stage, nineteen cases; in cesarean section, six cases, and for the induction of abortion, six cases. Ampules or vaporoles of the drug should alone be employed, as in my experience, constant results failed when the pituitary extract in bulk solution was used. For decided action, 0.4 gm. of the drug is usually called for, although in ordinary cases, with little obstruction, half that dose is sufficient. The effect lasts thirty minutes, and repetition of the dose is often called for. Intramuscular injection is usually satisfactory; causing no local reaction or pain. Further, no toxic symptoms were observed from the use of the drug even in maximum doses. Pituitary extract may be combined with ergot when the action of the former fails, and with heart stimulants in shock cases, without compromising the actions of these drugs. Pituitary extract has no place in normal labor, the administration should be confined to instances of primary and secondary inertia, to post-partum hemorrhage and cesarean section, in the last as a substitute for ergot.

The drug produces strong intermittent uterine contractions, often prolonged for several minutes. We have never observed true continuous tetanic uterine contractions (tetanus uteri). Although theoretically the uterine contractions are intermittent, practically in the face of resistance, the contractions approach to the continuous in character and clinically must be so reckoned with. Full and even small doses of the drug in the first stage of labor have caused fatal compression of the fetus, premature separation of the placenta, and deep rupture of the cervix. In the first stage or when some obstruction exists in the second stage, I give small tentative doses of pituitary extract, not with complete delivery by means of the drug in view, but to bring the head within easy reach of a simple forceps operation. Seven of my thirty-nine patients were thus treated. Pituitary extract acted promptly and efficiently in most of my thirty-nine cases of inertia in the second and first stages. Its action was more positive in multiparas than in primiparas; it acted better at full term than in premature cases; also better in the second than first stage of labor, and when administered shortly after the spontaneous artificial rupture of the membranes.

In the eighteen cases in which the drug was used immediately after the third stage for post-partum hemorrhage due to inertia, the results were disappointing—so much so that I consider its action here most unreliable and not so positive as the ergot preparations.

In the eighteen post-partum cases there was no effect from the drug in two cases, it was necessary to use ergot in two instances, hot acetic acid douche in two more, and to pack the uterus in seven cases; only in the remaining six cases was good uterine contraction observed. In cesarean section no advantage was observed in pituitary extract over ergot, aside from the observation that the former acted more promptly and hence need not be administered so early in the operation. In induction of labor the drug failed to initiate contractions, but apparently initiated them after the use of gauze, the bougie or hydrostatic bag for inducing labor. I believe that the drug strengthened already existing contractions not yet apparent to patient or physician. For primary inertia in abortion cases, the results with the drug were disappointing. For atony of the bowel and bladder and as a galactagogue the results were negative. The dangers to mother and child in the indiscriminate administration of this drug for primary or secondary inertia of the first or second stages of labor must be reckoned with. Only a few of the thirty-nine cases of inertia were in the first stage of labor, and these are earlier cases. The remainder were of the second stage, or border-line cases just merging into the second stage.

I consider the use of the drug in the first stage a dangerous practice, liable to cause death or deep asphyxia of the fetus, separation of the placenta, uncalled-for laceration of the cervix and possible uterine rupture.

In the thirty-nine cases of inertia in the first and second stages, two and probably four stillbirths were due to the use of pituitary extract before full dilatation, and three instances of deep laceration of the cervix requiring suture to control the bleeding. I look on the use of pituitary extract before full dilatation or dilatability of the cervix as equivalent to the use of ergot at this time. In fact, it is probably more harmful than ergot, by reason of the more powerful contractions produced, and the uncertainty of its action. I have repeatedly observed prolonged tempestuous contractions, when the drug was given in the face of too much resistance, closely simulating tetanic contractions of the uterus (tetanus uteri). The action of the drug is most uncertain. One can never predict in a given case, either from the amount of the drug administered or from the character of inertia and the obstruction to be overcome, how powerfully the drug will act on the uterus. I have repeatedly observed both in private and in hospital practice 0.2 gm. of pituitary extract, half the usual dose commonly employed, produce such prolonged and powerful uterine contractions that uterine rupture was imminent and anesthesia was required to control the action of the drug on the uterus. In my opinion the drug should never be employed for inertia in any stage of labor, unless anesthesia is at hand for immediate use, and preparations complete for immediate operative delivery if necessary, to avoid uterine rupture. Finally, with due regard to its action and possible dangers, I consider pituitary extract a most valuable addition to our resources for the treatment of primary and secondary inertia.

Under What Conditions Should Uterine Inertia Be Treated by Artificial Delivery?

Dr. Edwin B. Cragin, New York: Uterine inertia is of greater importance in the second stage of labor, especially if the membranes are ruptured and the pressure of the uterus comes directly on the child, than in the first stage, yet in several cesarean sections performed during a prolonged first case the presence of meconium in the liquor amnii and the marked slowing of the fetal heart prior to the operation have convinced me of danger to the fetus from uterine inertia even during the first stage of labor. Uterine inertia associated with fetal heart-sounds indicating danger to fetal life is one of the first types of inertia indicating artificial delivery. My plea is for studied, skilled, artificial assistance in the delivery before the mother and child are exposed to these dangers.

There is one condition not usually classed as uterine inertia to which I wish to call attention. It is the long delay which sometimes intervenes between the rupture of the membranes and the uterine contractions of the first stage of labor. Patients sometimes present themselves at the hospital with a history that the membranes ruptured three, four or even five days before labor began. An unfortunate experience several years ago in which the fetal heart ceased before the labor was completed, and a study of the temperature charts of a number of these cases, convinced me that in many particulars they resemble cases of uterine inertia during actual labor; that there is fetal danger from interference with fetal circulation from prolonged pressure and that maternal morbidity is common from sapremia if not from bacteriemia. For these reasons I have made it a rule in recent years both at the Sloane Hospital and in my private practice to introduce an elastic bag into the cervix if uterine contractions have not started at the end of twenty-four hours from the time of the rupture of the membranes. The elastic bag, as a rule, not only brings on uterine contractions, but lessens the further escape of the liquor amnii and the results, both fetal and maternal, have seemed to justify the procedure.

DISCUSSION

Dr. Edward P. Davis, Philadelphia: From the accumulated experience of the profession, it seems that pituitary extract comes into practical competition with strychnin, opium and ergot, and Dr. Edgar has given us a valuable hint as to the danger of the extract. We all recognize the fact that in many cases opium to the point of lessening nervous excitability and securing rest is of the greatest value in bringing about the development of the physiology of labor, and we are all aware of the frequent experience of the unexpected and rapid delivery of a multipara to whom we have given opium to secure rest, and how frequently the woman surprises herself and us most of all when we are caught napping; but certain it is that opium in the general experience of the profession is the one sedative which is a stimulant to the ganglion which controls the action of the uterus. It seems to me that the difference between strychnin and pituitary extract is that strychnin given in moderate doses is a physiologic stimulus to the ganglion supporting and maintaining uterine action, while pituitary extract is a matter of more brief and more stormy result, and hence is much more uncertain. I have not felt that I could substitute it for strychnin as a physiologic stimulant or aid in labor. The use of ergot should be carried out with great caution, and I still adhere to the belief that ergot should be given on the emptied uterus only, and that in cesarean section one may with advantage often lay aside ergot entirely. As an inducer and promoter of labor in connection with strychnin or pituitary extract, the dilating bag is of advantage over the bougie in that it decidedly stimulates the mucous secretion of the cervix and is less apt to alter the mechanism of labor.

Dr. John O. Polak, Brooklyn: No discussion of pituitary extract should go out without sounding a word of warning. I have had within the last three weeks a case of rupture of the uterus from its use. I have also seen within a month a woman who was thrown into such violent uterine contractions that anesthesia and morphin had to be used to control the spasm of the uterus; consequently from my experience, which is comparatively limited, only seventy-six cases, I have come to the conclusion that pituitary extract has little or no place in the first stage of labor, and that it is dangerous unless there is absolute knowledge of the nature of the pelvis, particularly in outlet and in border-line contractions. Furthermore, in order to secure the best results from pituitary extract we should have a dilated or at least a dilatable cervix. It has no value in establishing uterine contraction—in emptying the uterus in cases of incomplete abortion. Another observation which I have made is that when it is used in the third stage of labor, secondary relaxation has been obtained in a sufficient number of cases to warn us that when used in the third stage it should be combined with ergot.

Dr. Henry T. Byford, Chicago: There is a mild form of inertia which in primiparas means a great deal, perhaps, in some cases, owing to general exhaustion from muscular exercise of the prolonged first stage, or want of rest and exhaustion of the nervous system. I have seen many cases in which there was inertia of the cervix. The patient has an irritable condition of the parts and will have if the first stage of labor is unusual in its length. At one time, when investigating the function of the membranes in labor with a view to preserving them, I was in the habit of giving opium frequently; in these cases the administration of opium will give rest, particularly as it acts in contrast to the advice so often given to women to go about and try to stimulate labor.

Dr. William E. Studdiford, New York: My experience has been much the same as that of Dr. Edgar. The pituitary extract is so uncertain in its action in the first stage of labor and so apt to cause bad results in the cervix that the cervix should either be dilated fully or dilatable, which is, indeed, often the case; but when there is a positive diagnosis of no obstruction to rapid delivery, delivery can be brought about promptly. Therefore the question of diagnosis is important in the management of these cases as well as in the indications for treatment. An accurate diagnosis should be made before any line of treatment is followed out.

Dr. J. Clarence Webster, Chicago: In cases of uterine inertia associated with rigid or elongated cervix or hypertrophy of the cervix, the important measure of treatment is vaginal cesarean section, not abdominal cesarean section, unless there should be contraction of the pelvic outlet. My experience in use of pituitary extract harmonizes with that of Dr. Edgar, although I have not used it in so many cases as he has.

The Infant Pulmotor: Its Use in Asphyxia Neonatorum

Dr. Henry D. Fry, Washington, D. C.: The introduction of the infant pulmotor into obstetric practice is so recent that I have not been able collect any statistics of the value of the apparatus. Certainly, it is vastly superior for resuscitation to the ordinary methods of artificial respiration. We have had no opportunity to test it in a serious form of asphyxia, the so-called asphyxia pallida, but in the livid form it has acted promptly and resuscitated the infant in about five minutes. Efforts to resuscitate the infant should not be abandoned as long as there is any heart action.

DISCUSSION

Dr. J. C. Edgar, New York: I believe that I had the first infant Draeger pulmotor that came to this country. At first I looked on the machine with more or less skepticism, thinking that it was more of a plaything than anything else; but after using it for some time I found that there was some value in it. The inspiratory force should not be run up to 25. I think that 10 or 12 cm. of force is sufficiently high. Although I have made no necropsies to prove it, I believe that there is some likelihood of rupture of vessels when we run the inspiratory force up to more than 10 or 12 cm.

Dr. John O. Polak, Brooklyn: Can the pulmotor be attached to the ordinary oxygen tank in case of emergency?

Dr. Fry: We have an extra attachment so that it can be put on an ordinary oxygen tank.

Factors in the Formation of Skin Striations During Pregnancy

Dr. Frederick J. Taussig, St. Louis: Only thirteen out of sixty primiparas were free of skin striations. These occur most frequently at several points, and usually make their first appearance about the sixth or seventh month of gestation. In girls under 20 years of age, they are decidedly more pronounced and more frequently found than in older women. Obesity, particularly rapid increase in weight during pregnancy, predisposes to the formation of striae, especially those about the breast and thighs. Lack of abdominal support during pregnancy, as in those who wear no corsets, favors the formation of abdominal striae. On the other hand, the tense and inelastic skin in which such striae are found is to some extent a factor in subsequent abdominal relaxation. At any rate, abdominal muscular relaxation and abdominal skin striation go hand in hand. Perineal tears have apparently no relationship to skin striation. Finally, the persistent employment of proper skin massage will, in the great majority of cases, prevent the formation of the slightest skin striations.

The Menace of Cancer

Mr. Frederick Hoffman, Statistician of the Prudential Insurance Company of America: On the basis of trustworthy official data, it is safe to estimate the annual mortality from cancer in the United States as 75,000 and in the civilized world at half a million. The cancer death-rate in the United States is increasing at the rate of 2.5 per cent. per annum, and a corresponding increase is taking place practically throughout the civilized world. The average age of death of cancer in all forms is 59 years, or 60.4 years for males and 58.2 for females, respectively. Cancer is largely a disease of adult life, and of the total mortality from cancer, 90.7 per cent. were deaths at ages of 40 and over. The male cancer death-rate in the United States, ages 25 and over, has increased 29 per cent. during the last decade, and the female cancer death-rate has increased 23 per cent. On the basis of past experience, the distribution of cancer deaths in the United States during 1913 will be about as follows: cancer of the stomach and liver, 30,105; cancer of the female generative organs, 11,235; cancer of the rectum, intestines and peritoneum, 9,608; cancer of the breast, 6,817; cancer of the mouth, tongue, etc., 2,880; cancer of the skin, 2,670, and cancers of other organs and parts 11,685.

The cancer death-rate of large American cities has increased from 37.2 per hundred thousand of population during the five years ending with 1876, to 80.5 during the five years ending with 1911. The cancer death-rate of the city of New York has increased from 37.5 per hundred thousand of population during the three years ending with 1872, to 81.4 during the five years ending with 1912. The corresponding increase in the cancer death-rate of Philadelphia during the same period has been from 41.3 to 86.3. At ages of 60 and over in Massachusetts, the mortality from cancer of the external organs for males has increased from a rate of 65.1 during the five years ending with 1905, to 92.5 during the five years ending with 1910. The corresponding increase for females aged 60 and over has been from 85.6 to 122.3.

Aside from the observed increase in the mortality from cancer, there has been an increase in the mortality from biliary calculi in the registration area of the United States from 1.5 per hundred thousand of population in 1900, to 3.0 in 1911. All the facts available for the different sections of the country and the principal cities throughout the world sustain the conclusion that the menace of cancer is much more serious at present than it has been in the past. Since, as far as known, the disease is invariably fatal unless the cancer is removed in its entirety in the very early stages of the disease by operative treatment, it is obviously of the utmost importance that the elementary facts concerning cancer should be better known and understood than they are at present.

The only hope for the patient is the early possible recognition of the symptoms of cancer, when operative treatment is a comparatively easy matter, with a practical certainty of success. Neglect, on the other hand, is absolutely certain to result in death. The cancer problem suggests the intelligent coordination of all possible agencies for the control of what has properly been called a national scourge, and the deliberate reduction of the death-rate of what is stated to be a preventable disease when subjected to early operative treatment. There is, therefore, urgent need for a national society for the study and prevention of cancer, and it is a gratifying fact that such a society is in course of formation.

Dysmenorrhea Relieved by Nasal Treatment

Dr. Joseph Brettauer, New York: *An experience of two and a half years with the nasal treatment of dysmenorrhea shows that in about one-half the number of cases so treated, the final results are favorable. In some cases the benefit is temporary, requiring another course of nasal treatment. In other instances the relief is prompt and permanent after three or four caustic applications to the nasal spots during a menstrual interval. I have treated sixty-six cases.*

DISCUSSION

Dr. Emil Mayer, New York: Occasionally a young woman will come to my office with intranasal difficulty. Being interested in the question of painful menstruation, I elicit from some of them that they have suffered a great deal, and by treatment of the nasal conditions I am able to benefit them, so that my own statistics are more favorable than those of Dr. Brettauer, although I must say that he put his patients through a very severe test and did not accept my conclusions until he had seen the patients themselves. As to amenorrhea, I have had several young girls who did not menstruate at all for three or four months, but after applications to the nose, menstruation became established.

Dr. E. C. Dudley, Chicago: Should this cauterization treatment of the nose be used in all cases in which there are neither pelvic nor nasal lesions?

Dr. Henry T. Byford, Chicago: One of the chief objections I have to this method is the indefiniteness in regard to the kind of dysmenorrhea and the condition of the nose. As I understand, there has been no study made of the kind of dysmenorrhea to be helped. There are no lesions of the nose, except during the menstrual period, and they are usually regarded as a result, and not as a cause. When women have pain in the breasts every month, we do not treat the breasts, thinking that we shall cure any disturbance in the pelvis. There are many kinds of dysmenorrhea, one of which has not been described, namely, nervous dysmenorrhea. I am willing to concede that the treatment outlined by Dr. Brettauer will help patients who have this form of dysmenorrhea.

Dr. Robert C. Myles, New York: We find many cases in which the central nervous system seems to be in a state of aggravation or irritation as a result of serious local irritation in the nose, with phenomena occurring in other parts of the body; and when the irritation in the nose is relieved the other symptoms or phenomena disappear.

Dr. W. Gill Wylie, New York: After a long study of this subject I have come to the conclusion that in many of these cases the underlying cause is imperfect development of the lining membrane of the uterus. A peculiar case came under my observation not long ago. A mother brought her child to me. I asked her what the trouble was. She said that about the time of menstruation, or when it was approaching, her daughter could not appear in company, especially if there were gentlemen about, because suddenly her lips became so large and her face so red that she felt very uncomfortable and uneasy. On examination I found little or no abnormal changes in the vulva, except that the girl was not fully developed. I did not detect any gross disease, but I noticed that the secretions about the vulva became very profuse. I find that in women in whom a neurotic feeling develops or arises when the cervix uteri or the condition of the uterus is being examined, marked changes in the erectile tissue will be found.

Dr. Brettauer: In answer to Dr. Dudley's question, I should say by all means treat the nose in the absence of any pathologic condition in the nose and in the pelvis. I would do so as an experiment, as it can do no harm.

The Conduct of Gynecologic and Obstetric Operations in the Presence of Acute Chronic Endocarditis

Dr. John Osborn Polak, Brooklyn: *Pelvic conditions necessitating operation may be done after proper cardiac preparation. The cardiac symptoms, blood-pressure and the functional activity of the liver and kidneys are the only indexes of the time to operate. These patients should always be seen and treated in conjunction with a competent internist. The operation should be rapid, bloodless, and done under combined local and general anesthesia, morphin, novocain, ether and oxygen. The Trendelenburg posture should be used only until such time as the field may be isolated properly, when the patient may gently be lowered out of it. Phlebotomy should be done promptly on signs of right heart engorgement. Post-operative distention must be avoided. Morphin is the mainstay in therapeutics.*

Influence of Ectopic Pregnancy on the Blood-Supply of the Uterus

Dr. John A. Sampson, Albany, N. Y.: *As a result of ectopic pregnancy the uterus is enlarged, as a result mainly of hyperemia and a thickening of the endometrium. The changes in the latter are similar to those found in the decidua vera of early uterine pregnancy, and apparently are due to its arterial invasion from the terminal branches of the radial artery. The venous spaces of the endometrium are dilated, and this dilatation is most marked in the superficial portion of the compact layer and at its junction with the spongy layer. The termination of the pregnancy is followed by involution of the uterus. The first step in the involution of the endometrium is seen in the greater dilatation of the venous spaces, probably on account of regressive changes in the stroma, and apparently dependent on a diminished supply of arterial blood. The arteries are less evident during involution of the uterus. The dilatation of the venous spaces is followed by the escape of venous blood in the tissues of the endometrium. If the superficial venous spaces of the compact layer give way, the blood will escape into the uterine cavity without the formation of a decidual cast. On the other hand, if the venous spaces at the junction of the compact and spongy layer give way, the extravasation of blood will occur mainly between these two layers, and the compact layer will be expelled as a decidual cast. In time the regressive changes cease and are followed by a reparative process which is apparently dependent on the restoration of the arterial supply of the endometrium. The involution following the termination of tubal pregnancy is very similar to that following uterine pregnancy, differing only in degree.*

The uterine bleeding is of venous origin from the venous plexus of the endometrium due to regressive changes in the latter, apparently dependent on a diminished arterial supply. Muscular insufficiency may also contribute to this. The bleeding continues as long as the pregnancy (products of conception) interferes with the process of involution. It is probably analogous to the bleeding in subinvolution of the uterus due to an incomplete uterine abortion.

DISCUSSION

Dr. Hiram Vineberg, New York: I should like to ask Dr. Sampson how he would explain those cases of uterine hemorrhage, so far as symptoms go, that have occurred probably before the termination of pregnancy? The first symptom may be uterine hemorrhage. Perhaps a day or two later the woman may have an abdominal cramp showing that tubal gestation has taken place.

Dr. Sampson: In eleven cases of the series the uterus was retained when the opposite tube was examined, because the woman wished to have children. In every case I talked over the possibility of children before operating. I have followed the after-history in these eleven cases; five of the patients have not become pregnant although in two of them only a few months had elapsed since the operation. Two have borne children, two children in one case and one in the other; the patient who had one child subsequently had tubal pregnancy in the opposite side. Three have had miscarriages, although they asserted that they desired to have children. One had three miscarriages and the other two had one each. Another, the sixth one, had tubal pregnancy in the opposite side, making two cases of repeated tubal pregnancy in the eleven cases in which at the time of operation the tube, which was the seat of a second ectopic gestation, was apparently normal, and was retained with the hope that the women would have a child subsequently. I have encountered two other cases of repeated ectopic pregnancy in which the first operation was done by another operator, so that I did not know the condition of the tube at that time. I am perfectly willing to preserve the tube and the possibility of future conception in every patient who desires to have children. On the other hand, if we find that the opposite tube is diseased, and especially if these women are fairly well advanced in years, that is, from 35 to 40, and have had their share of children, I think that we should in every way make these patients just as well as we possibly can for the rest of their lives, and save them all future trouble. I can see little use in leaving behind a uterus which may have been the seat of inflammatory trouble or adhesions about it as the result of operation if it is only going to cause trouble.

In regard to bleeding without pain, all but one of these patients gave a history of uterine bleeding at some time during the illness. In one case the bleeding preceded the pain for three or four weeks, and I cannot account for it unless it indicated that the termination of pregnancy had begun, and the bleeding between the gestation sac and the wall of the tube was not sufficient to give rise to any serious symptoms. In nearly every instance one ovary was preserved.

The Relation Between the Blood-Pressure and the Prognosis in Abdominal Operations

Dr. George W. Crile, Cleveland: The relation between the blood-pressure and the prognosis in abdominal operation is based on two extremes, namely, an extremely low blood-pressure and an extremely high blood-pressure. Provided the heart is normal, we can now control the low-pressure phase by transfusion of blood, by mechanical means or by saline infusion. The high blood-pressure is far more difficult to control because it is difficult to control the factors that produce this condition. If there is cardiovascular disease due to infection or to lues, nitroglycerin may exert little control, although there is a type of cardiovascular disease that is controlled by nitroglycerin. It is not wise to reduce the blood-pressure by bleeding, and aside from nitroglycerin and hygienic measures, there are no other remedies. Therefore, as a matter of fact, the high blood-pressure is likely to be a more dangerous factor than is low blood-pressure. Whether the blood-pressure be abnormally high or abnormally low the patient is more apt to have complications such as thrombosis, emboli, pneumonia, nephritis and bronchitis; indeed, the abnormal pressure plays into the hands of the usual dangers and complications of abdominal operations. If operation be so performed that the nervous system will remain uninjured and the blood-pressure unaltered, then the maximum degree of safety would be reached. This I have found can be done on the principle of anoci-association.

Studies in Blood-Pressure Before, During and After Operations Under Local and General Anesthesia

Dr. Joseph C. Bloodgood, Baltimore: Even to-day, with better anesthesia and technic, we have a mortality, not from appendectomy or other simple operations, but from the graver operations such as resection of the stomach or colon and the more extensive operations for cancer or myoma of the uterus. At necropsy no infection of the wound, no break in the technic of the intestinal suture and no hemorrhage from the pelvic operation will be found, but still the patient dies. These patients die, as a rule, within forty-eight hours or three days with a gradual lowering of blood-pressure, a gradually increasing pulse and little or no fever, or they die of complications which in the healthy person are not serious. Patients die from anuria or complications of the kidney, heart and stomach, such as dilatation. This mortality has no relation to infection or faults in technic in the sense of hemorrhages, faulty suture of intestine leading to peritonitis, or incorrectness which will produce intestinal obstruction, but in the sense of death and shock or death from complications that are due to the shock of the operation. These complications are chiefly dilatation of the heart or stomach, and faulty kidney function.

In the last four or five years I have attempted to follow Dr. Crile's technic, and the most practical thing I can say to you is to do likewise in every case. My experience of three years shows that to develop the technic of anesthesia and operation and to give patients who are handicapped with an extraordinary operation the best opportunities for recovery, you must practice this newer technic in every case until you have it fully developed.

The Conduct of Gynecologic Operations and of Pregnancy and Labor in Acute and Chronic Affections of the Heart

Dr. J. Clarence Webster, Chicago: Operations should be avoided in active or recent valvular diseases, dilatation or myocardial degeneration, except in conditions of extreme emergency. General anesthesia may greatly increase the risk by causing coughing, straining, vomiting and respiratory embarrassment. Slow administration with free admission of air or oxygen is necessary. Local anesthesia is of importance in these cases. In slight or well-compensated affections, regular methods of anesthesia should be employed. Women with heart disease should not become pregnant. If pregnancy occurs it is on the side of safety to advise early abortion, especially if there be recent acute disease of any variety, old or mitral disease or old lesion with failure in compensation. If the condition of a patient in labor is good, all strain and excitement should be avoided during the first stage, as in normal cases. It is advisable to avoid straining in the second stage by artificial delivery, forceps or turning under anesthesia. In the third stage it is best to separate the placenta manually, allowing some loss of blood. A woman at term with failure in compensation or embarrassed circulation probably has the best chance if delivered by vaginal or abdominal cesarean section.

Treatment of Puerperal Thrombophlebitis

Dr. Palmer Findley, Omaha: The Trendelenburg operation is surgically correct in theory, but as a practical proposition it is a questionable procedure. The difficulties involved in the making of an accurate diagnosis before opening the abdomen are as yet insurmountable; furthermore, it is not possible to judge with accuracy the extent of the infection within the veins or elsewhere after the abdomen is open. We cannot rely on the sense of touch to locate with certainty the limits of a thrombus, nor can we judge with certainty the presence or absence of pus within the veins. Failure to find bacteria in the general circulation gives no absolute assurance of the localized character of the infection, nor can a physical examination of the lungs and other viscera exclude the possible presence of metastatic foci. It is in direct violence to our rules of practice to traumatize tissues in the immediate neighborhood of a virulent infection. In reviewing the reports of cases I have been seriously impressed with the boldness with which some operators violate this time-honored principle of surgery. If the infected veins are not dissected out have we not locked the thief in the stable when we do no more than ligate above the zone of the infection, and if we do dissect out the infected veins do we not incur serious hazards in the way of disseminating the infection? Furthermore, the risk of dislodging a thrombus in exploring the pelvic veins must be reckoned with. It is a physical impossibility to ligate all the veins leading from the genital organs, and unless all channels are blocked there can be no assurance of checkmating the infection. Among the ardent supporters of the operation are those who would ligate the lower end of the vena cava and both spermatic veins, maintaining that the collateral circulation can be depended on to reestablish the return circulation. Is this not an argument in favor of the contention that the venous channels leading from the infected uterus cannot be wholly controlled by ligatures? The physical resistance in all cases of puerperal infection is far below par, a fact which makes us cautious in adding further to the burdens of these patients. We may well rob them of the small amount of resistance which they possess. Little dependence can be placed on serums and vaccines in these cases. Whatever may be our views on the question of ligation of veins or on the administration of serums and vaccines, we are all agreed that the body resistance must be supported by fresh air and nourishing food.

What Are the Best Methods of Educating American Women Concerning Cancer?

Dr. Frederick J. Taussig, St. Louis: It is almost impossible to have printed in a lay periodical intended for general distribution any article on so distasteful a subject as cancer of the uterus. The only way it can be done is to incorporate it in special paragraphs in a general article on cancer, referring to uterine cancer in such words as not to give offense. In spite of the wide circulation thus obtained through some of our women's magazines, I do not specially favor this method as its lack of directness tends to diminish its effectiveness. I would suggest an occasional article in the journals of nursing, besides the distribution of special leaflets giving concise information as to early symptoms. It is best for the doctor, the nurse or social workers to give the leaflets in person to the laity. Leaflets that supply the necessary information are more apt to be read if presented personally than they are if sent by mail. In my opinion, much can also be accomplished in the distribution of literature and pamphlets through the agency of women's clubs. There is a directness in knowledge acquired by word of mouth that ordinarily makes it better retained. Hence I believe that much can be accomplished by lectures and personal conversation that mere printed matter fails to bring about. The lectures may be given either directly to the laity, before women's clubs or social settlement organizations, or they may be given before groups of persons who would most frequently be called on for advice, such as nurses, midwives, teachers, social workers, ministers or druggists. I would recommend that special stress be laid on the early symptoms of breast and uterine cancer in the curriculum of all nurses' training-schools and all colleges of midwifery.

Report of the Committee on Cancer

This committee, consisting of Drs. Howard C. Taylor, Frederick J. Taussig and Leroy Broun, reported that to accomplish these ends they are convinced that little can be done of lasting value excepting through an organized body, the sole purpose of which would be to conduct the needed campaign of education, of scientific assistance and the collection of data. They further believe that such a society should be of national scope, embracing all interested societies and organizations together with lay people throughout America. The work of this society should be carried on by a competent paid executive secretary and his office corps under the guidance of a central committee of surgeons to be appointed by its board of directors. The need of such an organization and the possible good to be accomplished through its labors was presented to certain public-spirited women of New York. Through their efforts and the hearty cooperation of the members of the American Gynecological Society, together with prominent surgeons and lay people, a meeting was held in New York. At this meeting the present needs and status of the cancer problem was presented in full before them.

At a later meeting of a committee on organization consisting of laymen appointed by this body, the sum of $5,000 was guaranteed toward the expense of such a society for the first year. The committee was authorized not only to make a statement to the American Gynecological Society of this guarantee, but also to present the following resolution:

> *Resolved,* That we request the American Gynecological Society to present the matter to each of the branches of the said congress interested in the subject and ask each of such branches to appoint a committee of two or more members to cooperate with us in forming a national organization for educational and publicity work in the recognition and treatment of cancer, and that we meet with such committees as soon as may be after the meeting of the said Congress of Physicians and Surgeons to be held during the week beginning May 4, 1913.

The committee recommended the endorsement and the enthusiastic cooperation of the society in the formation of such a national body. The committee further recommended that the American Gynecological Society appoint committees of two each to present this resolution to such component societies of the congress as they may deem interested in this matter, with a request for their cooperation.

The resolution was adopted and the committee was appointed

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

May, CXLV, No. 5, pp. 625-780

1 *Nephritic Hypertension: Clinical and Experimental Studies. T. C. Janeway, New York.
2 Circulation in Arm of Man. A. W. Hewlett, Ann Arbor, Mich.
3 *Instance of Premature Beats Arising in Auriculoventricular Bundle of a Young Child. T. Lewis, London, England, and H. W. Allen, San Francisco.
4 Problem of Alien Insane. S. L. Dawes, Albany, N. Y.
5 *Combined Tuberculosis and Carcinoma of Stomach; Report of Case in which Partial Gastrectomy Was Performed. H. H. M. Lyle, New York.
6 Control of Rabies. H. Albert, Iowa City, Iowa.
7 *Metabolism in Pellagra. V. C. Myers and M. S. Fine, New York.
8 Acute Suppurative Lymphadenitis, Abdominal, Due to Diplostreptococcus: Autopsy. O. W. H. Mitchell, Columbia, Mo.
9 *Occupational Brass Poisoning: Brass Founder's Ague.* E. R. Hayhurst, Chicago.

1. **Nephritic Hypertension.**—The symptom of hypertension in renal disease, Janeway says, can arise in three ways: 1. Hypertension may arise through purely quantitative reduction of kidney substance below the factor of safety. It is difficult to conceive of this as other than a vascular hypertonus due to retained poisons of some kind. Its clinical paradigm is the hypertension accompanying bilateral ureter obstruction or the unfortunate surgical removal of the only functionating kidney. Possibly it is one factor which helps to produce hypertension in the contracted kidney.

2. Hypertension may arise in connection with the unknown intoxication which causes disturbances of the central nervous system and which we call uremia. This intoxication is not one of retention, in a strict sense, though it is most commonly present in those cases of advanced nephritis which manifest marked nitrogen retention. Clinically it is associated with severe acute nephritis, sometimes at its very onset, besides the subacute and chronic inflammatory affections of the kidney.

3. Hypertension may arise in primary irritability of the vasoconstricting mechanism from unknown, probably extrarenal causes, which lead eventually to arteriolar sclerosis. In this type the disease in the kidney is the sequence, not the cause, of the generalized vascular lesion. When it progresses to a condition of extreme atrophy, resulting in the true primary contracted kidney, a renal element may be added to the existing hypertension. In some cases arteriosclerosis of the larger vessels may spread peripherally and produce a similar form of disease. In these primary vascular diseases it is probable that eventual wide-spread narrowing of the arterial stream-bed in some cases produces a permanent organic increase in peripheral resistance.

3. **Premature Auriculoventricular Beats.**—An instance of premature contractions is described by Lewis and Allen occurring in a child aged 4½ years; the point of origin of the beats was probably to be located in the main stem of the auriculoventricular bundle.

5. **Tuberculosis and Carcinoma of Stomach.**—The interesting point in this rare case, beside the association of these two supposedly antagonistic lesions, is the sequence of the lesions. From the clinical and pathologic evidence it seems probable that the original lesion of the stomach was a tuberculous ulcer of the pylorus, secondary to possible old lesion of the right apex. From this tuberculous ulcer a diffuse carcinoma developed. Partial gastrectomy with gastrojejunostomy, according to Billroth's second method was done May 5, 1907. The portion removed included two inches of the duodenum, the pylorus and the stomach to the Hartmann-Mikulicz line, with the corresponding glands. The pathologic report was: diffuse carcinoma of the stomach; tuberculosis of submucosa.

The patient made an uneventful recovery and remained well and continued steadily at work for two years and two months.

He was admitted to the tuberculosis service, with the diagnosis of pulmonary tuberculosis, and developed what was supposed to be an acute intestinal obstruction from adhesions. Under local anesthesia an exploratory laparotomy was performed. On opening the abdomen considerable blood-tinged serum escaped. The intestines were equally distended; no mechanical obstruction was found. The visceral and parietal peritoneum were studded with numerous small tubercles. The condition was paralytic, not mechanical. The distention was relieved by the formation of a left inguinal colostomy. The operation afforded only temporary relief, as the patient died two days later. Necropsy showed pulmonary tuberculosis; miliary tuberculosis of peritoneum and of the intestinal coverings; carcinoma of the stomach; parenchymatous nephritis, and fatty degeneration.

7. Metabolism in Pellagra.—The ability of individuals suffering from pellagra to utilize the various foodstuffs as indicated by the authors' series of fifteen experiments appears to be only slightly if at all below the normal. The elimination of mineral and nitrogenous constituents in the urine is such as would be anticipated under the dietary and physical conditions of the individuals. A lowered physiologic efficiency is indicated by the low creatinin coefficients and the elimination of small amounts of creatin in the urine. The presence of a few hyaline casts in about 45 per cent. of the cases points to some possible irritation of the kidney.

Anacidity is a condition common in pellagra, found in eight of their fourteen cases. It is generally associated with an entire absence of pepsin, or with pepsin in only very minute quantities. Individuals suffering from pellagra show a marked indicanuria, which is excessive in the cases with gastric inefficiency. Though the ethereal sulphate hardly parallels the indoxyl-potassium sulphate, the quantities eliminated are much higher where anacidity exists and they furthermore hold a higher ratio to the inorganic sulphates. The feces contain decidedly abnormal amounts of indol and skatol, especially the latter. The presence of excessive amounts of indican in the urine, associated with a high elimination of ethereal sulphates, when considered in connection with the abnormal amounts of indol and skatol in the feces, points to some unusual bacterial conditions in the intestine. From the data at hand this putrefaction would appear to take place rather high up in the intestine.

Annals of Ophthalmology, St. Louis

April, XXII, No. 2, pp. 213-435

10 Deficient Results in Experimental Findings Regarding Fluid Current of Eye. J. Kuschel, Luedenscheid, Germany.
11 Successful Proof of Intra-Ocular Fluid Current Based on Principle of Mechanical Adaptability. J. Kuschel, Luedenscheid, Germany.
12 Piece of Glass in Crystalline Lens, with Description of Eye Three Years and a Half After Accident. J. H. Claiborne, New York.
13 Early Fundus Signs of Arteriosclerosis. A. Greenwood, Boston.
14 Visual Disturbances Due to Diseases of Nasal Accessory Cavities. H. Moulton, Fort Smith, Ark.
15 Death After Cataract Operation. E. J. Bernstein, Kalamazoo, Mich.
16 Two Cases of Dermoid at Sclerocorneal Margin. B. Chance, Philadelphia.

Archives of Internal Medicine, Chicago

February, XI, No. 2, pp. 121-247

17 *Effects of Experimental Chronic Passive Congestion on Renal Function. L. G. Rowntree, R. Fitz and J. T. Geraghty, Baltimore.
18 *Experimental Study of Poison Oak. E. Von Adelung, Oakland, Cal.
19 *Experimental Eosinophilia with Extract of Animal Parasite. W. W. Herrick, New York.
20 Critical Study of Case of Myiasis Due to Eristalis. M. C. Hall, Washington, D. C., and J. T. Muir, Colorado Springs, Colo.
21 Interpretation of Normal Electrocardiogram. J. A. E. Eyster and W. J. Meek, Madison, Wis.
22 Unsaturated Fatty Acid as Neurolytic Agent. H. M. Adler, Boston.

17. Effects of Chronic Passive Congestion on Renal Function.—The method utilized by the authors for the production of chronic passive congestion of the kidney consisted briefly of the application of constricting bands about the renal veins or about the vena cava above the entrance of the renal veins. The bands were obtained by cutting sections approximately 1 cm. in length from ordinary goudé catheters which were sterilized by boiling for a period of two or three minutes. The functional tests used in this connection were essentially five, e. g., phenolsulphonephthalein, lactose, salt, potassium iodid and water. A brief description of these various tests, together with the technic is given.

It was found that slight experimental chronic passive congestion of the kidney is characterized by (a) a normal quantity of urine which contains a trace of albumin, intermittently a few hyaline and granular casts and occasionally a few red blood-cells; (b) the functional capacity varies but little from normal, since phthalein, salt and potassium iodid may be all normally excreted, while lactose excretion is but slightly delayed. Moderate experimental passive congestion of the kidneys is characterized by (a) a fair amount of urine containing albumin, casts and frequently red blood-cells; (b) a total excretory capacity which is apparently not markedly decreased, since the phthalein excretion is usually normal. The excretion of salt is usually somewhat decreased, that of potassium iodid variable, that of lactose invariably delayed. Marked experimental chronic congestion of the kidneys is characterized by (a) very scanty amount of urine containing a large amount of albumin, casts and red blood-cells; (b) a much reduced functional capacity, since the phthalein, salt and lactose excretions are markedly delayed, as is also frequently that of iodid. Albuminuria is almost a constant accompaniment of experimental passive congestion, casts are usually present, and red blood-cells appear if the congestion is of any considerable degree. Lactose excretion is the first to become affected by increasing grades of chronic passive congestion; then the excretion of salt and iodid, and lastly, that of phthalein.

The phthalein test gives the most reliable information concerning the degree of renal insufficiency in experimental chronic passive congestion. Marked delay in the excretion of lactose, iodid and salt has, indeed, been encountered in animals showing a normal phthalein output. These animals were, however, apparently in good general condition, while subsequent events showed that they remained in good condition. On the other hand, a marked decrease in phthalein excretion has invariably been associated with the development of clinical manifestations, indicating renal inadequacy and followed by death. The phthalein test is, therefore, the test of greatest prognostic importance in chronic passive congestion. Lactose, while of least value in revealing the degree of involvement of renal function in experimental chronic passive congestion of the kidney, is of the greatest value in detecting its existence. It is, therefore, of these tests that of greatest diagnostic, but of least prognostic value.

The excretion of potassium iodid is usually prolonged in experimental chronic passive congestion of the kidney. The time of elimination of this drug is, however, so variable that the test proves practically valueless in this connection. The excretion of sodium chlorid is usually decreased where moderate or marked experimental passive congestion is present.

Partial obstruction to venous return through the renal vein is not invariably associated with decreased urinary secretion. In an apparently normal unanesthetized or anesthetized (chlorbutanol) animal which has partial occlusion of one renal vein only, more urine is sometimes excreted from the congested kidney, while the solids are excreted in greater concentration from the normal side. Where gradual progressive obstruction to the renal vein occurs, the development of a collateral circulation is of great importance in maintaining the functional capacity of the kidney since an efficient renal function may be encountered when the venous return from the kidney is entirely collateral. On the other hand, ligation of collateral vessels, simultaneously with a moderate degree of obstruction to the renal vein, usually results in renal inefficiency and death. An excessive flow of blood through the kidney simultaneously with an obstruction to its outflow may be followed by polyuria. Mild grades of experimental chronic passive congestion are not associated with the accumulation of incoagulable nitrogen in the blood. Varying degrees of chronic passive congestion which are unassociated with nephritis are produced by the above-described procedures.

18. **Poison Oak.**—It was found by v. Adelung that the toxic principle of rhus, while non-volatile, can poison at a distance by means of mechanical carriers. It is not destroyed by subjection for one hour to 100 C., and is carried, potent, by the smoke from burning rhus plants. The dermatitis is purely a local affection, and is not spread by the blood or lymph, or by the serum of the blebs. The sweat reaction has no relation to susceptibility. Absolute immunity in man is improbable, and experimental immunity in animals is not yet demonstrated. A permanent aqueous suspension of the alcoholic solution of the toxin can be prepared and remains toxic; this is precipitated by salt. As much as 0.025 gm. toxin given intravenously in aqueous suspension to a 2,000 gm. rabbit does not kill, nor does as much as 0.03875 gm. given to a 280 gm. guinea-pig subcutaneously.

Inasmuch as animals cannot be killed by the pure toxin, it is impossible to demonstrate antitoxic effect by the serum of animals that have received repeated doses of the toxin. The Bordet-Gengou fixation reaction failed to demonstrate the presence of antibodies in the serums of animals so treated.

The simplest prophylactic measure against rhus poisoning, the authors state, is to wash well with soap and hot water as soon after exposure as possible. The protection of the skin by anointing with cotton-seed oil before exposure, and washing this off within a few hours with soap and water, renders prophylaxis fairly certain. The following remedies have therapeutic value: hot water, ichthyol, collodion, potassium permanganate, magnesium sulphate and tincture of iodin.

19. **Experimental Eosinophilia.**—The problems toward the solution of which Herrick attempted to contribute are as follows: 1. Whether eosinophilia of the blood could be produced experimentally by the use of an extract of *Ascaris lumbricoides.* 2. Under what conditions of administration of this extract such eosinophilia might be brought about. 3. Whether or not the substance influencing the eosinophils is a protein. 4. Whether such eosinaphil increase bears any relation to specific sensitization or anaphylaxis. Throughout the work the possible relation of these questions to the clinical problem of bronchial asthma has been constantly in mind.

The results of his study showed that a notable eosinophilia of the blood can be developed by the intraperitoneal injection of an aqueous extract of *Ascaris lumbricoides.* The substance causing such eosinophil increase is a protein. Previous sensitization is necessary to the development of this eosinophilia. It is impossible to produce such eosinophilia while the animals are immune to the extract. This eosinophilia may therefore be considered evidence of previous sensitization. Herrick suggests that there is a possible association of these facts with the problem of bronchial asthma.

Arizona Medical Journal, Phoenix

April, I, No. 4, pp. 1-51

23 Operative Technic. W. Smith, Phoenix.
24 Chronic Constipation. E. C. Prentiss, El Paso, Texas.
25 Salvarsan, New Cure for Syphilis. N. D. Brayton, Phoenix.
26 *Malta Fever: Cases Occurring in Arizona. C. E. Yount and R. N. Looney, Prescott.
27 Foreign Bodies in Urethra with Report of Case. R. F. Palmer, Mesa.

26. **Malta Fever in Arizona.**—The authors report five cases of Malta fever occurring in Arizona during the past eighteen months. They believe that the Arizona goats will furnish a rich field to the scientific investigators of Malta fever. The first patient was a goat herder. In June, 1911, he had fever and malaise; could scarcely drag himself after the goats. Pain and aching in every bone, was feverish and thirsty, and drank more freely of water and fresh goat's milk, but still continued to herd the goats. During July the fever and aching were worse, so that he could not herd the goats, but got a light job as camp cook. Was chilly at times and had a profuse perspiration at nights. "Took to bed" August 4, but never remained in bed all day; was never delirious, had a good appetite and always got up for his meals. Usually chilly at night after profuse perspiration. Obstinate constipation from the first, but never noticed any bloating of bowels. This condition lasted about two months. Did not consult a physician, nearest one being fifty miles away. His friends diagnosed his disease as typhoid, but he states that he had had both typhoid and malaria, and this fever was different. During September he had no chills and sweatings, but was very weak and pale and had lost 15 pounds in weight. Had "rheumatism" in right hip, right leg, and both shoulders and constipation continued obstinate. October—no fever, chilly sensations, or sweating, but "rheumatism" continued, constipation overcome by laxatives. About Feb. 4, 1912, right testicle began to swell, accompanied by slight chills and constant chilly sensations. February 22, right testicle swollen to about four times normal size and very tender to pressure. Temperature 102. Sterile needle and syringe used to drain off blood and serum from testicle. The specimen gave positive agglutination with the micrococcus melitensis. The second and third patients used goat's milk on cereals. The fourth patient used goat's milk on cereals and worked with the goats. The fifth patient drank goat's milk and assisted in herding the goats. All these patients were in some way connected with the goat-raising industry.

Arkansas Medical Society Journal, Little Rock

May, IX, No. 12, pp. 283-303

28 Early Diagnosis of Tuberculosis and Its Management Among Poor. S. E. Thompson, El Dorado.
29 Significance of Urinalysis in Pregnancy. J. C. Cunningham, Little Rock.
30 Treachery of Typhoid. C. S. Pettus, Little Rock.
31 Pneumonia. G. A. Warren, Black Rock.

Boston Medical and Surgical Journal

May 15, CLXVIII, No. 20, pp. 713-748

32 *Excretion of Formalin in Urine; Inquiry into Accuracy of Burnam's Test. G. G. Smith, Boston.
33 Serous and Suppurative Labyrinthitis; Differential Diagnosis. I. W. Voorhees, New York.
34 *Acute Angulation of Terminal Ileum as Cause of Intestinal Obstruction in Certain Cases of Acute Appendicitis. D. Cheever, Boston.
35 Use of Pituitary Extract in Surgical Shock. C. A. Hill, Pittsburgh.
36 *Artificially Dried Casein: Preliminary Investigation. H. I. Bowditch, Boston.

32. **Excretion of Formalin in Urine.**—Smith examined 213 specimens collected from fifty individuals, most of whom had normal kidneys. Positive tests were those which showed more than a mere trace of formaldehyd. One hundred and ten urines were positive. Of these 102 had a hydrogen ion concentration of 6.80 or more, that is, were truly acid. Eight had hydrogen ion concentrations of less than 7, that is, were truly alkaline. These were divided as follows: 7.10, two cases; 7.15, one case; 7.20 five cases. One hundred and three showed no formaldehyd. Of these eighty-two had hydrogen ion concentrations of 7.10 or less, that is, were alkaline. Four were neutral. Seventeen were acid, of the following hydrogen ion concentrations: 6.85, two cases; 6.70, three cases; 6.30, three cases; 6.15, one case; 5.85, two cases; 5.70, two cases; 5.50, one case.

From the work done with this drug, Smith has reached these conclusions as to dosage and output: Five grains of hexamethylenamin, although often sufficient to give a strong formaldehyd test, does not appear in the urine with enough regularity to warrant its routine use. Grains 7 is nearly always followed by good quantities of formaldehyd or hexamethylenamin lasting for from six to ten hours. Grains 10 every eight hours or grains 15 at 7 a. m. and 6 p. m. is the dose which Smith would recommend. The kidneys of chronic nephritis, to judge from a few observations, excrete hexamethylenamin much more slowly than do normal kidneys. One dose of grains 15 has given traces of formaldehyd in the urine for thirty-six hours. These urines are abnormally acid; formaldehyd has always been liberated.

In cases with persistently alkaline urine, Smith has tried to change the reaction by the use of various drugs. Sodium benzoate, grains 15 t.i.d. has had no appreciable effect; boric acid, grains 10 t.i.d. was effectual in several cases, but some writers warn against its toxicity. Sodium acid phosphate given directly after meals in one-half to one teaspoonful doses seemed more efficient than the other two, but in one case its use had to be abandoned because of the resulting diarrhea. Among the fifty individuals whose urine Smith examined, there was only one (diverticulum of the bladder and pyonephrosis), in whose urine free formaldehyd was never detected.

Smith concludes:

1. Burnam's test for formaldehyd in urine is definitely positive when this substance is present in the strength of 1 part in 40,000 or more.
2. The urine should be examined as soon as possible after it has been voided. A negative test at one time does not prove that formaldehyd is never liberated.
3. From the evidence at hand Smith believes that formaldehyd is liberated from the hexamethylenamin by the acids of the urine, not by a specific function of the renal epithelium.
4. This process may take place in the kidney, but is continued in the bladder.
5. Litmus paper, as an indicator of the true acidity of the urine, was unreliable in about 25 per cent. of the cases examined.
6. The degree of acidity of urine, as measured in terms of its hydrogen ion concentration, showed in his cases a constant relation to its power to set free formaldehyd. The higher the acidity, the greater was this power.
7. The requisite amount of acidity, which is not great, is present in the majority of normal urines, and can be secured in almost all cases by the use of boric acid or sodium acid phosphate.
8. Smith disagrees with the statements of Burnam and L'Esperance that only 50 to 60 per cent. of individuals break up hexamethylamin. Examination of 213 specimens from fifty individuals showed that only in the urine of one case was formaldehyd never found.

34. Intestinal Obstruction in Acute Appendicitis.—In acute pelvic appendicitis, where the inflamed or gangrenous appendix has been torn from its bed on the lateral pelvic wall, from brim to floor, Cheever says the occurrence of the earliest symptoms of acute intestinal stasis, especially if appearing after an interval of a few days of normal convalescence, should lead to the assumption that there exists an acute angulation of the terminal ileum at the pelvic floor. After the elimination of ill-placed drains as a factor, at the earliest justifiable moment, the attack should be directed at that point by a secondary operation. If the patient's condition does not justify this, a better than forlorn hope is offered by ileostomy.

36. Artificially Dried Casein.—Bowditch has saved the casein curd that has previously been lost. The casein curd can be dried and made into stable, pure, soluble or insoluble powder. This powder may be used to increase the accuracy of administration of casein.

Canadian Medical Association Journal, Toronto

May, III, No. 5, pp. 355-449

37 Surgical Treatment of Pendulous Abdomen. J. McKenty, Winnipeg.
38 Salvarsan in Treatment of Syphilitic Diseases of Central Nervous System. R. G. Armour, Toronto.
39 Milk and Meat Inspection. C. E. Edgett, *Montreal.*
40 Liposis Pancreatica. E. J. Mullally, Montreal.
41 Primary Malignant Neoplasm of Fallopian Tube. F. B. Gurd, *Montreal.*

Cleveland Medical Journal

April, XII, No. 4, pp. 233-320

42 Dysmenorrhea. J. H. Carstens, Detroit.
43 *Toxic Dose of Salicylates According to Clinical Statistics. P. J. Hanzlik, Cleveland.
44 Effect of Successive Ligation of Renal Arteries on Nitrogen Balance. J. D. Pilcher, Cleveland.
45 Recent Advances in Treatment of Syphilis. H. N. Cole, Cleveland.
46 Conservative Surgical Methods in Operating for Stone in Kidney. W. E. Lower, Cleveland.
47 *Diagnosis of Cerebral Hemorrhage by Means of Lumbar Punctures. O. P. Bigelow, Cleveland.
48 Examination of Pelvic Organs in Doubtful Cases Through Vaginal Incision. H. Robb, Cleveland.
49 *Intestinal Absorption of Alcohol. P. J. Hanzlik, Cleveland.

43. Toxic Dose of Salicylates.—The clinical records of 400 patients extending over a period of about twelve years were examined by Hanzlik. The mean toxic doses of the different salicylates for males and females, respectively, were found to be as follows: 180 and 140 grains of the synthetic sodium salicylate; 200 and 135 grains of the "natural" sodium salicylate; 120 minims of the methyl salicylate or oil of gaultheria; 165 and 120 grains of acetysalicylic acid or aspirin; 100 and 83 grains of salicylosalicylic acid. The toxic doses of the different salicylates were found to be practically the same in various disease conditions of both sexes. In all conditions where there were three or mor cases, the toxic dose of the synthetic salicylate ranged between 150 and 220 grains for males; between 135 and 160 grains for females. Practically the same is true for the "natural" salicylate and methyl salicylate.

The therapeutic response (or clinical therapeutic result obtained after a toxic dose) in various diseased conditions does not modify the toxic dose of the synthetic salicylate. The therapeutically effective doses, just as the toxic doses, are somewhat smaller for females than for males. The therapeutic efficiency of the synthetic salicylate is greatest (82 per cent.) in acute rheumatic fever. Subacute rheumatism and other conditions are also relieved, often completely, but the percentage of complete successes is not nearly as great (41 to 53 per cent.) and the percentage of failures much higher (16 to 29 per cent.). In sciatica, no complete relief was obtained, but the majority (about 73 per cent.) of patients showed more or less relief. It was found that in males albuminuria was much more frequent (about 70 per cent.) in febrile than in afebrile conditions. This suggests strongly that the renal irritation is due to fever, rather than to the salicylate. The effect of repeated dosage in the same individual was also studied. It was found that the differences below and above the common range of 100 and 200 grains, respectively, cannot be attributed to the influence of age, sex, race and diseased conditions. The idiosyncrasy generally varies in the same person and is not influenced by previous salicylate medications. There was also no demonstrable habituation to the synthetic salicylate.

47. Cerebral Hemorrhage.—Bigelow found that cerebral hemorrhage can be detected by examination of the spinal fluid in perhaps 90 per cent. of cases if the examination be made within three weeks after the "stroke." For the first four days or so there is a cloudiness or bloodiness of the fluid of varying degree, depending on the amount of blood which has escaped. Then a color, due to hemoglobin, varying from light canary yellow to reddish-brown, appears and persists in some degree for about three weeks. After that time the only guide in the spinal fluid is a probable persistence for some time of a slightly elevated cell count and protein content.

49. Intestinal Absorption of Alcohol.—Hanzlik's present investigation deals with ethyl alcohol, i.e., ordinary grain alcohol. Definite quantities of alcohol of a known strength were injected into duplicate ligated loops of intestine of equal length (15 cm.), the absorption being allowed to continue for a given length of time under varying conditions. At the end of the given interval the loops were excised and the alcohol recovered from the contents and intestinal wall and its quantity deduced from the specific gravity. It was found that when approximately 10 per cent. alcohol is introduced into the intestinal tracts of dogs and cats in doses of 10 c.c. per kilo, there is an arrest of absorption at the end of half an hour after injection. This is independent of the percentage absorbed, which varies from 33 to 85 per cent., leaving from 15 to 67 per cent. of the alcohol unabsorbed. A comparatively slight and almost negligible absorption continues for one or two hours.

Hanzlik is convinced that the incomplete absorption of alcohol is not due to reexcretion, since the intestinal canal excretes a much smaller quantity (0 to 0.14 gm.) than that which remains in the intestine when absorption is arrested. There must, therefore, be an actual inhibition of absorption. This does not seem to be due to a strictly local action, for preliminary treatment of an intestinal loop with alcohol does not inhibit the absorption of subsequent portions of alcohol from the same loop. On the other hand, the absorption from the intestine is diminished 5 to 20 per cent. by intravenous injections of 10 per cent. alcohol. The effect, therefore, seems to be systemic. It is not, however, due to changes in the systemic blood-pressure.

In addition the following facts were established: The absorption of alcohol differs for different individuals of the same species, but the average was practically the same in the different animals studied, i.e., cats and dogs. The same was true of phenol and sodium iodid. The extent of intestinal surface does not affect the absorption of alcohol. Phenol and iodid behaved in a similar manner. The absorption of alcohol is about the same for all divisions of the small intestines although slightly higher in the stomach and greatest in the colon. With phenol, the absorption was quantitatively identical for the stomach and intestine. In the case of the iodid the absorption was about a third less in the stomach and colon than in the small intestine. The absorption is scarcely influenced by the concentration of the alcohol, although a 10 per cent. solution of alcohol is absorbed slightly better than 5 and 50 per cent. solutions. Undiluted phenol was found to be absorbed a trifle better than a 5 per cent. solution.

With the sodium iodid, the 10 per cent. solution was absorbed best, while weaker solutions, i.e., 1, 2 and 5 per cent. solutions somewhat less. Necrotic agents, such as formaldehyd and concentrated phenol; and calcium chlorid, which diminishes the permeability of cells; and sodium fluorid, which acts as a protoplasmic poison, all diminish the absorption of alcohol. Agents which cause visible anemia tend to lessen the absorption, while those which cause visible hyperemia tend to increase it. Practically the same results were obtained with phenol and sodium iodid. After death the absorption of alcohol from the stomach and intestinal loops is comparatively good, averaging about 19.6 per cent. For phenol the post-mortem absorption averaged about 16 per cent.; for sodium iodid about 35 per cent.

Kentucky Medical Journal, Bowling Green

May 1, XI, No. 9, pp. 339-392

50 Pellagra. J. G. Owsley, Lily.
51 Symptoms and Diagnosis of Pellagra. M. W. Steele, Corbin.
52 *Pellagra as Related to Insanity. W. E. Gardner, Lakeland.
53 *Pellagra as Public Health Problem. O. P. Nuckols, Pineville.
54 *Pellagra in Eastern Kentucky. J. H. Hendren, Cary.

52. Abstracted in The Journal, Nov. 30, 1912, p. 1998.

53 and 54. Abstracted in The Journal, Nov. 23, 1912, p. 1917.

Maine Medical Association Journal, Portland

May, III, No. 10, pp. 1311-1354

55 Symptomatology and Clinical Types in General Paralysis. C. J. Hedin, West Pownal.
56 Symposium: Paresis, Etiology and Early Diagnosis. F. L. Hills, Bangor.
57 Laboratory Aids in Diagnosis of General Paralysis. H. E. Thompson, Bangor.

Medical Record, New York

May 17, LXXXIII, No. 20, pp. 875-920

58 *Certain Elementary Concepts in Education Applied to Medicine. J. G. Adami, Montreal.
59 Prevention and Cure of Cancer. P. Syms, New York.
60 Surgical Treatment of Cancer of Esophagus. W. Meyer, New York.
61 Purification of New York Harbor. G. A. Soper, New York.
62 Cancer of Uterus. R. M. Rawls, New York.

58. **Elementary Concepts in Education Applied to Medicine.**—Medical education, Adami declares, is no longer a state matter only; it is one of interstate concern. In Canada there has been established for now many years a General Medical Council for the United Kingdom. That council registers all duly qualified medical men. And here is the significant fact: that council conducts no examinations. What it does is this: from time to time it sends to the various schools a small and select committee of two or three experts, men high in our profession. That committee reports on the quality of the instruction provided at those schools; it is present at the examinations and reports on their scope and efficiency, and according to the report given, so does the council as a body approve of the school, in which case its diploma is accepted as qualifying for registration, or disapprove of the school, in which case specific reasons are given, and the representatives of the school are afforded the opportunity to present their side of the case. Finally if the recommendations of the committee are supported by the council as a body, either the school has to modify its procedure forthwith in agreement with those recommendations, or it has to cease to exist. Certain common regulations are laid down as to length of curriculum, essential subjects for preliminary and professional training and so on, to which all schools must subscribe, but the final approval rests not on quantity but on quality of the education and examination afforded.

The time, it seems to Adami, is ripe for a similar procedure in the United States, for the appointment of a Federal Medical Council, subsidized by the government at Washington, and formed of representatives from all the states, a council which should appoint well-known leaders of the profession to act as committees or assessors, to visit, report on and make recommendations regarding the efficiency and deficiencies of the individual medical schools of this continent, the expenses of such inquisitions to be met by the schools visited. The Carnegie Foundation has prepared the way, but there is needed now, Adami continues, not a private but a national institution, an institution authorized not by the profession alone, by the American Medical Association, for example, but by the nation at large, which shall act authoritatively in these matters. He would say, let each state control and direct its own educational methods, but let the federal assessors test the results and make sure that they reach the desired standard of quality. If this be asking too much at the present moment, at least the State might take action, might appoint committees of inquisition to inquire and report on the quality of the instruction afforded and the examinations of the schools within its boundaries, and might accept the graduates of those schools without the present farce of an examination which does not educe the capacity of the examinee. Education is something beyond mere instruction; that we are every whit as much interested in the quality of the secondary school education as in medical education proper; that both in secondary and medical education there must be more elasticity, more freedom allowed for the individual school to control its own development; that sameness means not perfection but intellectual death.

New Jersey Medical Society Journal, Orange

May, IX, No. 12, pp. 599-652

63 Short Spica in Treatment of Hip-Joint Disease. C. R. Keppler, New York.
64 Rest—Nature's Remedy. G. K. Dickinson, Jersey City.
65 Acne Vulgaris. C. J. Hailperin, Newark.

New York Medical Journal

May 17, XCVII, No. 20, pp. 1009-1060

66 Venereal Diseases. H. M. Biggs, New York.
67 Dispensary Facilities for Treatment of Syphilis. H. F. Swift, New York.
68 Dispensary Treatment of Gonorrhea. E. L. Keyes, New York.
69 Hospital Accommodations for Treatment of Venereal Diseases. S. S. Goldwater, New York.
70 Relationship of Syphilis to Internal Medicine. W. T. Longcope, New York.
71 Hypertrophy of Prostate. J. H. Gleason, Manchester, N. H.
72 Gastro-Intestinal Therapy. J. N. Upshur, Richmond, Va.
73 Medical Experts and Expert Medical Testimony. H. M. Friedman, New York.
74 *Surgical Aspect of Gastric Ulcer. J. C. Kennedy, New York.
75 Neosalvarsan. O. L. Suggett, St. Louis.

74. **Gastric Ulcer.**—In his series of twenty-two operations on the stomach Kennedy performed four gastrojejunostomies for duodenal ulcers with no mortality. Eight gastrojejunostomies were done for gastric ulcer with one death; in this a viscious circle was formed and the patient refused further operative treatment until it was too late to remedy the defect. There were three excisions of chronic gastric ulcers; one situated in the posterior stomach wall, perforated, and adherent to the pancreas, in which a gastrojejunostomy was not done; another on the anterior gastric wall, perforated twenty-eight hours before the operation, and the patient, being thoroughly septic and exhausted, died the second day

following the operation. The third was a somewhat similar case.

Four operations were done for advanced cancer, where a partial gastrectomy could not be done and in which a posterior gastrojejunostomy was done, with the Murphy button as a palliative measure. One of the patients died, within two weeks, of exhaustion, due largely to his starved condition. The others lived from six to twenty-four months in far greater comfort and ease than if they had been fed on morphin. The best behaved of this last group lived a little over two years, eating three meals a day, and so far as carcinoma and its symptoms went, was progressing well when he died of pneumonia.

Gastrostomy was done in one case for cardiospasm, due to malignant disease of the cardiac orifice, death following in six weeks from an attack of acute Bright's disease coupled with exhaustion. In the second case of cardiospasm due to cicatricial contraction, the esophagus was dilated so that the patient could take food with very great comfort. This patient died of pneumonia several weeks after the treatment began. In one case of cancer of the pyloric end of the stomach involving the pylorus itself, a partial gastrectomy was done. In this case, which was almost unsuitable for this operation because of adhesions present—the middle colic artery was injured—the patient survived but a few days.

Oklahoma State Medical Association Journal, Muskogee

May, V, No. 12, pp. 525-568

76 Acute Yellow Atrophy of Liver. W. E. Stewart, Norman.
77 Local Anesthesia in General Surgery. L. Watson, Oklahoma City.
78 Preventive Medicine or Conservation of Human Life. H. L. Wright, Hugo.
79 Obstetrics in Country. M. A. Warhurst, Sylvain.
80 Infective Inflammation of Hand. J. J. Dial, Muskogee.
81 Gastric Cancer. M. Smith, Oklahoma City.

West Virginia Medical Journal, Wheeling

May, VII, No. 11, pp. 861-898

82 Child Welfare. S. L. Jepson, Wheeling.
83 Diagnosis in Children. O. M. Staats, Wheeling.
84 Diagnosis of Thoracic Lymph-Node Tuberculosis During Childhood. J. C. Abbott, Piedmont.
85 Hypertrophied Tonsils and Adenoids. O. M. Brooks, Moorefield.
86 Syphilis in Children. C. O'Grady, Charleston.
87 State Board of Health and Public School Sanitation. L. S. Brock, Morgantown.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 8, I, No. 2731, pp. 921-976

1 *Present Evidence for and against Use of Tuberculin as Specific Cure. H. B. Shaw.
2 *Plea for Uniform Method of Treatment with Tuberculin. H. H. Thomson.
3 Prognosis in Pulmonary Tuberculosis: Results Obtained by Arneth's Method. J. B. H. Holroyd.
4 Epiglottic Suture: Its Value in Indirect Laryngoscopy. C. Horsford.
5 *Cheilotomy: Function-Restoring Operation in Crippling Traumatic Arthritis of Hip-Joint. W. S. Handley and C. P. Ball.
6 Case of Enteroliths. J. Anderson.
7 Removal of Intrathecal Tumor from Lumbar Region of Spinal Cord. J. M. Clarke and C. A. Morton.
8 *Classification of Tumors of Hypophysis. G. v. Bonin.

1. **Evidence for and against Tuberculin.**—Like all vaccine treatment, tuberculin in Shaw's opinion is certainly capable of effecting a change in the aspects of the disease. But, he says, it has never been proved experimentally that such changes are curative; the alleged curative changes can be explained on anaphylactic grounds.

2. **Uniform Method of Treatment with Tuberculin.**—It has generally been accepted that the method of treatment with tuberculin is the same at the dispensary as in the sanatorium, but this is not the case, says Thomson. In the sanatorium, patients are under constant medical supervision, and the amount of muscular and respiratory activity is regulated according to the requirements of each individual case. In the sanatorium, treatment by auto-inoculation takes the place of the preliminary course of treatment with exotoxic tuberculin at the dispensary. Excellent results are obtained in a sanatorium by a course of tuberculin containing both endotoxin and exotoxin administered when patients have ceased to react to the maximum amount of walking exercise and manual labor; in other words, when a certain degree of tolerance to exotoxin has been secured.

At the dispensary, on the other hand, the muscular and respiratory movements of the patient are not under intelligent control. The patient is liable to show sensitiveness to auto-inoculation with the exotoxin of the bacillus, hence a degree of tolerance sufficient to steady the temperature must first of all be produced by a course of treatment with exotoxic tuberculin. The method of administration and frequency of dosage are a source of no little diversity of opinion. In Thomson's experience the most efficient and permanently beneficial focal result is obtained by inoculating the patient once a week and by gradually increasing the dose without the production of any marked general or focal reaction, 99 F. being regarded as the danger zone. If the doses are rapidly increased and reaction is ignored a high degree of toxic tolerance may be obtained, but this is secured at the expense of tissue immunity, so that the last stage of the patient becomes worse than the first.

The following is the method of treatment with tuberculin which Thomson has adopted. At the dispensary: (a) A course of treatment with T. O. A. (exotoxic) until a certain degree of tolerance is produced. The following doses are given every eighth day:

0.00001 c.c., 0.00002 c.c., 0.00003 c.c., 0.00004 c.c. 0.00005 c.c., 0.000075 cc.. 0.0001 c.c., 0.0002 c.c., 0.0003 c.c., 0.0004 c.c., 0.0005 c.c., 0.00075 c.c., 0.001 c.c.

(b) When the dose of 0.001 c.c. has been reached a course of treatment with new tuberculin W., both of which contain endotoxin and exotoxin of the human bacillus, is commenced in the following doses:

Immediately following the 0.001 c.c., T. O. A., 0.00005 c.c., 0.000075 c.c., 0.0001 c.c., 0.0002 c.c., 0.0003 c.c., 0.0004 c.c., 0.0004 c.c., 0.0005 c.c., 0.00075 c.c., 0.001 c.c., 0.002 c.c., 0.003 c.c., 0.004 c.c., 0.005 c.c., 0.0075 c.c., 0.01 c.c., 0.02 c.c., 0.03 c.c., 0.04 c.c., 0.05 c.c., 0.075 c.c., 0.1 c.c. This is the maximum dose, and it is repeated at gradually increasing intervals.

The above course of treatment applies to well-marked types of the disease with evidence of slight phases of recurring or persistent auto-inoculation. Thomson has not found it necessary or desirable to go above the maximum dose of 0.1 c.c of pure tuberculin.

In the sanatorium: In the sanatorium a course of treatment with exotoxic tuberculin is replaced in the majority of cases by treatment with induced auto-inoculation. The patient with an active tuberculous focus is thus led from a period of rest through the various stages of induced auto-inoculation to a full course of treatment with tuberculin containing both the endotoxin and exotoxin of the human bacillus. Part of this course will be commenced at the sanatorium, but it will usually be completed at the dispensary. Thomson recommends in the sanatorium a course of new tuberculin W. in the following doses:

0.00001 c.c., 0.00002 c.c., 0.00003 c.c., 0.00004 c.c., 0.00005 c.c., 0.000075 c.c., 0.0001 c.c., 0.0002 c.c., 0.0003 c.c., 0.0004 c.c., 0.0005 c.c., 0.00075 c.c., 0.001 c.c., 0.002 c.c., 0.003 c.c., 0.004 c.c., 0.005 c.c., 0.0075 c.c., 0.01 c.c., 0.02 c.c., 0.03 c.c., 0.04 c.c., 0.05 c.c., 0.75 c.c., 0.1 c.c. The maximum dose to be repeated at gradually increasing intervals.

5. **Cheilotomy.**—The operation employed by Handley and Ball in the treatment of chronic hypertrophic arthritis, especially if it be uniarticular and of traumatic origin, consists in opening the hip-joint and removing the cornice on the head of the femur, so far as it is accessible, by suitable bone-cutting instruments devised to work in a cramped space. On account of its technical difficulty the operation is somewhat prolonged, but in two instances cited shock has been absent and convalescence uneventful. The authors suggest the name

cheilotomy for this operation. They utter a word of warning against the indiscriminate application of the operation in unselected cases. For cases in which the constitutional or toxic element of osteoarthritis predominates, the method is obviously unsuited, and other methods of treatment, including the vaccine treatment, should always be tried. Nor should the operation be undertaken save under the best conditions, with ample assistance, with all possible aseptic precautions and with the essential preliminary of a good stereoscopic radiograph of the joint. The best and most suitable cases are probably those in which the medical and vaccine treatment has improved the patient in relation to his or her general health and in which the smaller joints (probably those most recently affected) have improved, but the one joint shows distinct osteitic changes as described.

8. **Classification of Tumors of Pituitary Body.**—A new scheme of classification based on the principle of histogenesis is given by v. Bonin.

I. Heterotopic Tumors.
1. Tumors of the cranio-pharyngeal duct.
2. Teratomas.
II. *Homoiotopic Tumors.*
1. Epithelial tumors:
(a) From anterior lobe { Chromophile, *Chromophobe*, Combined
(b) From pars intermedia
} Cubic cell adenoma, *Round cell adenoma*, Carcinoma
2. Tumors developed from connective tissue:
(a) From anterior lobe and pars intermedia { Fibroma, Sarcoma
(b) From posterior lobe.........................Glioma
3. Mixed tumors.........................*Fibro-adenoma*

Clinical Journal, London

April 16, XLII, No. 2, pp. 17-32

9 Some Cervical Cysts of Congenital Origin. G. H. Edington.
10 Diagnostic Value of Sensory Changes in Diseases of Nervous System. H. Head.
11 Acquired Mental Defect. A. F. Tredgold.

April 23, No. 3, pp. 33-48

12 Contraction Ring as Cause of Dystocia. C. White.
13 Some Obscure Affections of Foot. A. H. Tubby.

April 30, No. 4, pp. 49-64

14 Vaccine Treatment of Septicemia. W. H. Wynn.
15 Diagnosis and Treatment of Scoliosis. E. Gillespie.

Edinburgh Medical Journal

May, X, No. 5, pp. 385-480

16 Causation and Treatment of Deformities Following Anterior Poliomyelitis. B. P. Campbell.
17 Absence of Certain Mitral Murmurs in Mitral Disease. W. T. Ritchie.
18 *Multiple Myeloma: Report of Three Cases. T. Shennan.
19 General Paralysis of Insane: Its Prophylaxis and Treatment. G. M. Robertson.

18. **Multiple Myeloma.**—Multiple myeloma, Shennan states, appears to be a system disease of the hematopoietic apparatus, of malignant nature; blastomatoid rather than true blastoma. He believes it is questionable whether all the different varieties of myeloma described in the literature of the subject can be clearly differentiated from each other. He suggests that possibly the apparent differences are due to the variability of one cell type, and that the apparent metastases do not result from embolism of cells of the new formation in the marrow, but are due to simultaneous transformation of foci of hematopoietic tissue present in the organs or to direct local extension. Nothing definite or trustworthy is known with regard to the etiology of the disease. Shennan advocates that the nomenclature in common use clinically should be amended. The name myeloma should be either restricted so as to indicate only the disease for which it was introduced by Rustizky, and it should not be employed to designate all new formations in the interior of bone, including the myeloid or giant-celled sarcoma and other central sarcomas of bone, the cells of which are not derived from bone-marrow parenchyma; or, the term myeloma should be given up completely, seeing that the termination -oma suggests to many, tumor formation, and the term myelomatosis, which has been proposed, should be adopted generally in place of it, seeing that this term connotes a definite pathologic alteration, *sui generis*, of bone-marrow proper.

Journal of Hygiene, London

December, XII, pp. 207-402

20 Reports on Plague Investigations in India.
21 Attempt to Separate Antigen from Nucleoprotein of Plague Bacillus by Filtration Through Gelatin. S. Rowland.
22 *Besredka's Method of Vaccination. S. Rowland.
23 *Relation of Pseudotubercle to Plague as Evidenced by Vaccination Experiments. S. Rowland.
24 *Mechanism of Plague Immunity. S. Rowland.
25 Onset and Duration of Immunity Consequent on Inoculation of Plague Nucleoprotein. S. Rowland.
26 *Opsonic Index in Plague Vaccination. R. S. Brooks.
27 *Preparation of Antitoxic Plague Serums. A. T. MacConkey.

22. **Besredka's Method of Vaccination.**—Experiments were undertaken by Rowland to determine the toxicity of a "whole" vaccine prepared according to Besredka's method and the amount of endotoxin that could be extracted from plague bacilli before and after soaking (sensitizing) in antiserum. No difference was discoverable between the lethal dose of the organism that had been soaked (sensitized) in antiplague serum and those that had been treated simply with salt solution. A slight apparent difference was noticed in favor of organisms that had been sensitized in normal horse serum. A repetition of this experiment showed no diminution of toxicity in the case of the bacilli treated with serum. From the second experiment, it is concluded that on sensitizing the plague bacillus in an antitoxic serum no permanent neutralization of the endotoxin takes place. The control experiment in which the bacilli were treated in salt solution showed that the effect of sensitizing in either anti or normal serum is *nil* as regards the amount of nucleoprotein or the toxicity of the nucleoprotein. Rowland is therefore unable to confirm Besredka's statement that sensitized organisms yield an atoxic vaccine, for the whole organisms after sensitization are just as toxic as before and no neutralization of the endotoxin takes place as the result of the sensitizing. As the immune serum neutralized the endotoxin after extraction from the bacilli he concludes that the antitoxin cannot enter the bodies of bacilli killed by heat.

The main experiments that led to the recognition of the normal amboceptor in the serum of normal horses were as follows: (1) 80,000,000 virulent living bacilli were added to 1 c.c. of fresh normal horse serum. The serum was kept at 37 C. No multiplication took place and at the end of twenty-four hours the serum was sterile. (2) 83,000,000 living virulent bacilli were added to 1 c.c. of the same serum as was used in the last experiment. The serum had been heated to 58 C. for one hour. Multiplication took place and followed the same curve when the numbers were plotted against time as the same number of bacilli inoculated into broth. (3) 10,000,000 living virulent bacilli were added to 1 c.c. of the same serum that had been heated. At the same time 0.04 c.c. of fresh normal rat serum was added to the tube. No multiplication took place and at the end of four hours only half a million bacilli were recognized. The growth and fate of living plague bacilli were traced in horse serum by direct microscopic observation. Specially constructed observation slides were used which, with a perfect method of dark ground illumination, permitted a record of the appearances of the living organisms and of their number.

23. **Pseudotubercle in Relation to Plague.**—Rowland summarizes his studies on this subject as follows: The plague bacillus is equally virulent for guinea-pigs and rats, but whereas it is easy by either the whole bacillus or the contained nucleoprotein soluble in saline to immunize the rat against plague it is almost impossible to immunize the guinea-pig, either by means of the bacillus or its nucleoprotein. The pseudotubercle bacillus is almost without pathogenicity for rats whereas the guinea-pig is susceptible to it. It is easy to immunize the guinea-pig against plague by means of the pseudotubercle bacillus; very difficult to immunize the rat. It was not found possible to immunize either the rat or the guinea-pig against plague by means of the nucleoprotein contained in the pseudotubercle bacillus. Whereas the nucleprotein of the plague bacillus grown on broth agar is toxic for rats it is hardly so at all for guinea-pigs. The nucleoprotein obtained from the pseudo-tubercle bacillus is relatively

innocuous to either rats or guinea-pigs. Rowland converted the bacillus of plague which kills rats acutely into a bacillus which will hardly kill them at all and then without any of the postmortem signs of plague. On the other hand as regards guinea-pigs he has converted the acute killing bacillus into a chronic killing bacillus. The bacillus that was found in the culture of the plague bacillus in the nucleoprotein solution was indistinguishable from the typical pseudotubercle bacillus.

24. **Mechanism of Plague Immunity.**—Whatever the mechanism, says Rowland, the fact remains that the same toxin that is capable of provoking the formation of antitoxin in the horse is capable of neutralizing it in the immune serum of this animal, while when it is injected into rats it provokes an immunity to infection with the living organism, the essential features of which seem to be resident in the serum of this animal, and to be in turn capable of being neutralized by the endotoxin.

26. **Opsonic Index in Plague Vaccination.**—Brooks found that the substance which produces a rise in the opsonic index in immune plague serum is the nucleoprotein contained in the bodies of the bacilli. The washed bodies of the bacilli when used as a vaccine do not cause any increase in the opsonic index. Within limits, the larger the dose, the greater the opsonic response. A second dose of vaccine raises the index above the maximum of the first inoculation, even after the curve has fallen to its normal level. In the early stages, in rats, the opsonic response and the degree of protection aroused rise together. In human beings the maximum response is observed to be much later than in the case of laboratory rats, and the response in a series of previously vaccinated persons is somewhat greater than in a series of persons not previously vaccinated. The local and constitutional effects of nucleoprotein vaccination compare very favorably with those observed in other methods of protective inoculation.

27. **Preparation of Antitoxin Plague Serums.**—MacConkey succeeded in obtaining a plague antitoxin serum by means of injections of toxin obtained from the plague bacillus by Rowland's sulphate process. So far, however, the antitoxin value has not been high. The usual neutralizing power has been 300-400 rat M. L. D. (minimum lethal dose) per c.cm. and on only one occasion was the value of 750 M. L. D. reached. Plague serum retains its antitoxic properties for months unimpaired. Heating at 56 C. for half an hour on each of three successive days has no effect on the antitoxin. Plague antitoxin may be concentrated by the same process that is used for concentrating diphtheria antitoxin.

Journal of Obstetrics and Gynecology of British Empire, London

April, XXIII, No. 4, pp. 193-264

28 Artificial Vagina. Various Operative Procedures for Correcting Atresia Vaginae. G. B. Marshall.
29 *Pseudo-Eclampsia with Two Illustrative Cases. I. Cerebral Tumor; II. Meningitis. H. Croom.
30 *Excretion of Amylolytic Ferments in Urine During Toxemias of Pregnancy. D. Corbett.

29. **Pseudo-Eclampsia.**—Croom reports two cases which closely and minutely simulated eclampsia, but in both of which cases the feature of toxic eclampsia, namely, urinary changes, was entirely absent. In one case there was a large tumor of the left anterior parietal region, fatty and catarrhal change in the kidneys and fatty degeneration of the liver and heart. Edema of the lungs was also present. The tumor reached to within half an inch of the anterior end of the left hemisphere and was situated opposite the superior middle and inferior frontal convolutions of the convex surface of the hemisphere, and opposite those parts of the marginal and callosal convolutions (on the inner surface) which lie above the anterior half of the corpus callosum. Essentially the tumor consisted of epithelium with a supporting stroma of connective-tissue. The points of interest mentioned in this case by Croom, apart from those giving rise to symptoms simulating eclampsia, are (1) the situation of the tumor in the brain in the anterior lobe, a region of the brain which has hitherto escaped the localization of function; (2) that a tumor of this consistence and size must have occupied that situation for a long time without giving rise to any symptoms at all. There was nothing to give the slightest inkling that the brain tissue was in any way involved. Symptoms such as squinting, irregularity of the pupils, and various paralyses were entirely absent. The second case was one of tuberculous meningitis.

30. **Amylolytic Ferments.**—Based on an examination of the ferment content of the urine, Corbett divides cases of eclampsia into main groups: 1. Primarily renal type—where the toxin has some special affinity for the renal epithelium—either following the typical albuminuria of pregnancy where the kidneys have been damaged for a comparatively long period, or as a more acute condition. Here, Corbett seys, one may expect low readings, together with much albumin in the urine. The diastase value for the serum may exceed that of the urine. Whether there may be a relative increase in the ferment content of the serum or urine before eclampsia supervenes is not at present known. 2. Secondarily, renal type—where the damage to the kidneys is of less importance. There may be changes in the liver and possibly in the pancreas. The liver changes are shown by the presence of bile acids and leucin in the urine. There are also other evidences of disordered metabolism, such as the excretion of acetone and diacetic acid. Here during the eclamptic period there will be a large percentage of albumin in the urine together with high diastase values for the serum and urine. In the other rarer forms in which there is no albuminuria and in which there are no recognizable changes found in the kidneys postmortem, an examination of the diastase value of the urine might yield interesting results.

Lancet, London

May 3, I, No. 4679, pp. 1217-1284

31 Birth Palsy: Subluxation of Shoulder-Joint in Infants and Children. H. A. T. Fairbank.
32 Case of Ankylostomiasis in Birmingham. R. Saundby.
33 Radium Emanation Therapy W. Engelmann.
34 Use of Tuberculin in Diagnosis and Treatment. J. F. Halls-Dally.
35 Treatment of Confirmed Cases of High Blood-Pressure. A. Mantle.
36 Protozoa-Like Structures in Blood in Case of Blackwater Fever. A. C. Coles.

Sei-I-Kwai Medical Journal, Tokyo

April, XXXII, No. 4, pp. 41-62

37 Method of Increasing Body Weight. H. Sewaki.

Annales de Gynécologie et d'Obstétrique, Paris

April, XL. No. 4, pp. 193-256

38 Specimen of Hydatidiform Mole Still in the Uterus. C. Sauvage.
39 *Cancer of Fallopian Tube. (Carcinome placentaire ou chorio-épithéliome malin de la trompe.) L. Bazy.

39. **Cancer of Fallopian Tube.**—Bazy's patient was a woman of 25 supposed to be at the seventh month of a pregnancy which had seemed normal at first but uncontrollable vomiting and cachexia had developed and the abdomen was enlarged only on one side. An operation revealed a placental carcinoma which had developed in the right tube. It was like a sponge, gorged with blood and bled at the slightest touch. The patient was unable to rally and died the next day. Bazy has found only eleven cases on record of placental cancer in a tube and none has been published before in France. These lesions throw light on the etiology of cancer, showing that there is no need for the intermediation of a parasite for the epithelium to acquire on occasion this power of anarchical growth. And there is nothing known which apparently provides the specific conditions to start this so effectually as an extra-uterine pregnancy. The only wonder is that cancer does not develop more frequently at the site of an extra-uterine pregnancy. In the eleven cases on record death followed soon after the operation in eight cases, and in three others the cancer was not found till after death. Cases of this kind confirm anew the necessity for treating extra-uterine pregnancy always as if it were already a manifestation of malignant disease, that is, by an immediate operation.

Archives Générales de Médecine, Paris

April, XCII, No. 4, pp. 293-384

40 Mechanotherapy in Acute Pleurisy. (Le traitement mécanothérapeutique de certaines formes de pleurésie aigue) E. F. Cyriax.
41 Technic for Respiration Exercises. (L'emploi du spiromètre dans les manoeuvres de la *méthode de l'exercice physiologique de respiration.*) G. Rosenthal.

Archives des Maladies du Cœur, etc., Paris

May, VI, No. 5, pp. 305-368

42 Automatic Movements of the Ventricles with Fibrillation of the Auricles; Two Cases. (Deux cas d'automatie ventriculaire avec fibrillation des oreillettes.) A. Souques and D. Routier.
43 *Hemorrhagic Diseases with Purpura. (Quatre variétés de maladies hémorragipares avec purpura.) E. Lenoble.
44 Viscosity of the Blood. (Etude physio-pathologique de la viscosité sanguine.) M. Lisbonne and J. Margarot. Commenced in No. 4 and continued.

43. **Purpura of Various Origins.**—In the first case the hemorrhagic purpura accompanied kidney disease, probably tuberculous, in a girl of 16. Under calcium chlorid and arsenic the hemorrhagic tendency subsided. In the second case a boy of 12 had what was evidently chronic purpura with large ecchymoses and absence of nucleated reds. The lungs, heart, spleen and liver were apparently normal. No benefit was realized from epinephrin, strychnin arseniate, or a single injection of 10 c.c. of peptone. The third patient was a physician of 54 with a history of dysentery and malaria, who for nine years had occasional attacks of jaundice and fever. During the last six years an orthostatic purpura developed. The general health was not impaired and the tendency to purpura kept up for several weeks and then subsided. Not much influence was apparent from the calcium chlorid taken. The fourth patient was a boy of 12 and the hemorrhagic tendency was evidently due to scorbutus from the child's peculiar diet as he refused ordinary food. Study of the blood in these cases confirms anew the assumption that purpura in some cases is a true disease of the blood, characterized by the lack of clotting, changes in the hematoblasts and the normoblast myeloid reaction. In addition to this true hemorrhagic purpura, there is an incomplete form affecting exclusively the blood-plasma, as in the last case described above.

Bulletin de l'Académie de Médecine, Paris

April 22, LXXVII, No. 15, pp. 303-344

45 From the Seat of War. (Des enseignements de la guerre des Balkans.) E. Delorme. See Paris Letter, p. 1552.
46 The Menstrual and Intermenstrual Passive Congestion of Uterus and Ovaries. (Les vagues utéro-ovariennes. Les jours fatidiques de la femme. L'aspect protéiforme des lésions génitales.) Dastre and Stapfer.

Journal de Médecine de Bordeaux

April 20, XLIII, No. 16, pp. 243-256

47 Pathogenesis of Hemolytic Jaundice. (Ictères acholuriques) E. Leuret.

April 27, No. 17, pp. 257-272

48 The Physician and Infant Welfare Work. (Le rôle de l'accoucheur dans la lutte contre la mortalité infantile.) Chambrelent.
49 Teeth at Birth. (Sur 3 cas de dents à la naissance) P. Balard and C. Commes.

Lyon Médical, Lyons

April 13, XLV, No. 15, pp. 777-824

50 Typhoid Spondylitis in Woman of 60; Recovery. M. Favre and L. Bovier.
51 Extraction of Pin Embedded in Bronchus. (Cas d'épingle enclavée dans la bifurcation bronchique du lobe inférieur droit. Extraction par bronchoscopie inférieure. Guérison.) Sargnon and Vignard.

April 20, No. 16, pp. 825-880

52 Tumor in Cerebellopontine Angle; Two Cases. E. Pallasse.
53 Radioscopy of Normal Stomach *in* Right Decubitus. A. J. de Beaujeu.

April 27, No. 17, pp. 881-944

54 Case of Total Aphasia. J. Froment and O. Monod.
55 *Advantages of Tincture of Iodin in Ophthalmology. Jacqueau.

55. **The Use of Iodin for the Eyes.**—Jacqueau finds that tincture of iodin is as invaluable an antiseptic in ophthalmology as in genuine surgery. There is no risk involved as the tissues of the eye bear it perfectly. One or two drops of cocain should be instilled beforehand to avoid pain, and the iodin applied directly to the seat of injury by means of a cotton pledget. It is particularly valuable in affections of the lids, in corneal ulcers and for preoperative and post-operative work on the eyeball. Many cases of injuries which are ordinarily sent to the specialist could be successfully treated by the *general practitioner* by the application of tincture of iodin. He has thus used it in thirty-seven cataract operations among others.

Presse Médicale, Paris

April 16, XXI, No. 31, pp. 305-312

56 *The Cerebrospinal Fluid* in Syphilis. (Le liquide céphalo-rachidien dans la syphilis et la parasyphilis nerveuses.) *H. Roger.*

April 19, No. 32, pp. 313-324

57 Diatheses. (Le lymphatisme: Diathèse d'anaphylaxie-immunité.) J. Galup.

April 23, No. 33, pp. 325-336

58 Total Paralysis of the Muscles of the Leg; Deformity from Gravity. C. Ducroquet.
59 Improved Technic for Local Anesthesia for Extraction of Teeth. (L'eau oxygénée associée à la cocaine ou la novocaine—methode de Marmouget—pour l'extraction des dents) G. Mahé and F. Vanel.

April 26, No. 34, pp. 337-348

60 Evacuation of Submaxillary Abscess Through the Mouth. (L'ouverture buccale des abcès sous-maxillaires d'origine ganglionnaire.) H. Morestin.
61 *Permanent Weakness of the Pulse. (Syndrome hyposphyxique et insuffisance pluriglandulaire.) A. Martinet.
62 Revival of Arrested Heart Action. (La reviviscence du coeur.) L. Lagane.
63 Advantages of Tape instead of Cord for *Tying off the Pylorus.* (Exclusion pylorique par ruban et non par lacet.) G. Parlavecchio.

61. **Weakness of the Pulse.**—Martinet has been studying hundreds of patients over periods of months and years to determine the connection between the viscosity of the blood and the blood-pressure. This has *shown* that with normal cardiovascular conditions *the blood-pressure parallels the* viscosity, that is, the individual has the blood-pressure of his viscosity so long as the cardiovascular apparatus is normal. When the viscosity *is normal or below, if there is* renal arteriosclerosis, for example, the blood-pressure will be high. On the other hand, if the viscosity is high while the *blood-pressure is normal or low, the pulse will be weak. This* hyposphyxia syndrome, as he calls the persisting weakness of the pulse, is characterized by a tendency to cold hands and feet, congestion in the *liver, varices and various subjective* cardiovascular disturbances. Closer study of forty-eight patients in this class revealed a number of symptoms suggesting insufficiency of certain of the ductless glands. He is inclined to regard the weakness of the pulse as the primary disturbance; the feeble cardiac impulse and the abnormally high viscosity of the blood impede the blood-supply and hence interfere with the nourishment of the glands, thus setting up a vicious circle. He remarks that this conception of a constitutional inherited, postinfectious or functional hyposphyxia plus pluriglandular insufficiency opens a new outlook for therapeutics.

Revue de Médecine, Paris

April, XXXIII, No. 4, pp. 251-352

64 *Post-Apoplectic Amnesia. (Cas d'amnésie de fixation post-apoplectique. Autopsie.) H. Mabille and A. Pitres.
65 Unreliability of *Alleged Test for* Differentiating Cortical and Subcortical Motor Aphasia. (L'épreuve de Proust-Lichtheim-Dejerine.) Monod.
66 *Associated Pneumococcus Infection. (Pneumococcies associées.) M. Lafforgue.
67 Paralysis of the Bladder and Sudden Death in Pneumonia: Three Cases. Revillet.

64. **Postapoplectic Amnesia.**—A syphilitic, aged 34, had an apoplectic attack but after a few months he recovered almost completely both his power of motion and his mental faculties. While he was capable of recalling perfectly the events of his past life and of understanding and appreciating his present surroundings, he was absolutely unable to fix any new memories. After twenty years in the asylum he still always thought

he had entered it the same day and had no recollection of his daily life there. Death occurred twenty-three years after admission and autopsy showed two symmetrical areas of softening, one in each hemisphere in the midst of the white substance which forms the center of the prefrontal lobes. The prefrontal lobes being cut off from their anatomic connection with the occipital and sphenoidal lobes, impressions could not be fixed as memories though they could be clearly perceived. This is in accord with the experimental work done on the prefrontal lobes of monkeys.

66. **Associated Pneumococcus Infection.**—Lafforgue reviews the literature on pneumococcus infection secondary to other diseases, such as Bright's disease, cirrhosis of the liver, nephritic pericarditis and peritonitis, typhoid fever and tuberculosis. He describes from his own practice three cases of malaria with sudden attacks of pneumonia, in all of which pneumococci were demonstrated by blood-culture. Malaria seems to favor the development of a latent pneumococcus infection, either by the decreased phagocytic power of the leukocytes or on account of the favorable culture medium furnished by the hemoglobinemia. In malarial countries, pneumococcus infection should suggest examination for and treatment of malaria.

Archiv für Gynaekologie, Berlin

XCIX, No. 2, pp. 225-453. Last indexed March 15, 1913, p. 868

68 Ductless Gland in Gravid Uterus. (Untersuchungen über die sogen. Glande endocrine myométriale.) L. Fraenkel.
69 Innervation of the Uterus. (Die Nerven der Gebärmutter.) J. Hoogkamer.
70 Serology of Pregnancy Pyelitis; Eight Cases. (Serologisches und klinisches über Schwangerschaftspyelitis.) W Weibel.
71 Changes in Adrenals in Pregnancy and after Castration. (Veränderungen der Nebenniere bei Schwangerschaft und nach Kastration.) W. Kolde.
72 Bacteriologic Control of Asepsis in Gynecologic Laparotomies. W. Sigwart.
73 *Frank's Technic for Subcutaneous Symphysiotomy. E. Kehrer.
74 Multiple Primary Carcinoma of Female Genital Apparatus. H. Hauser.
75 Melanosarcomas of the Clitoris. E. Vogt.
76 *Obstetric-Gynecologic Importance of Tetany. E. Kehrer.
77 Prophylactic Treatment of Eclampsia. W. Stroganoff.

73. **Subcutaneous Symphysiotomy.**—Kehrer has applied Frank's technic in ten cases and found it remarkably simple and free from danger of injury of the bladder, vagina, urethra or other adjoining tissues with the one exception of the corpus cavernosum of the clitoris. This was injured in 60 per cent. of the cases and led to a hematoma and in 30 per cent. of the cases to thrombophlebitis in the leg. The maternal mortality in the 118 cases on record has been only 0.8 per cent., in contrast to the mortality of 4.1 per cent. in the 217 recorded cases of subcutaneous pubiotomy. All the children were safely delivered in the seventy-nine women who had borne children before; the technic is only exceptionally applicable to primiparae. The great advantage, he reiterates, of subcutaneous symphysiotomy is that it permits expectant treatment to be carried to the very farthest limit. Weakness of the labor pains does not seem to be a contra-indication to the operation. Its special field is with universally contracted, shallow pelves with a true conjugate down to 6.9 or 6.8 cm. A possibility of infection already installed need not contra-indicate it, but with suspicion or certainty of infection it is wiser to prefer the extraperitoneal cesarean section. Subcutaneous symphysiotomy by Frank's technic does not interfere with the gait later. If it were not for the occasional hematoma and thrombophlebitis the method would be ideal.

76. **Tetany from the Obstetric-Gynecologic Point of View.**—Kehrer gives the details of numerous cases of tetany in or following a pregnancy or gynecologic operation, including a number from his own experience. Study of the common features and of results of experimental research confirms the causal importance of calcium in the development of tetany and the importance of the parathyroids as controlling calcium metabolism. During pregnancy the calcium is drained from the mother to form the bones of the fetus and the drain continues during lactation. In 20 cases, plus 2 from his own experience, the tetany developed first during a pregnancy, no month predominating; in 25 cases it recurred during pregnancy; in 4 it developed during the pregnancy in women who had previously had tetany; in 7 during a pregnancy after an operation for goiter, and in 2 after a long preceding goiter operation; in 3 the tetany developed during delivery; in 22 it appeared during the puerperium or lactation; in 8 it recurred at this time, and in 3 plus 1 it developed during lactation in women who had previously had tetany. Not only maternity tetany but also the tetany of osteomalacia and rachitis can be readily explained by the losses of calcium resulting from insufficiency of the parathyroids.

Januszewska, who practices in Bosnia, has reported that she has encountered 3,500 cases of osteomalacia among 20,000 patients in the course of ten years, and in 328 cases tetany was combined with the osteomalacia. Schönborn has reported a case of osteomalacia terminating after six years in fatal tetany with cachexia in a woman addicted to morphin. Hemorrhages, loss of body fluids, injury of the parathyroids by compression or an operation—anything in this line may bring on tetany, and it is very important to recognize the predisposition to it and thus be able to ward it off in time with calcium chlorid. Kehrer makes a point of examining for symptoms suggesting tetany in all pregnant and puerperal women and after gynecologic operations, examining for Chvostek's sign and, if this proves positive, inquiring in regard to paresthesias in the hands, formication, muscular weakness or stiffness, and pains in the fingers during sewing or writing. When these are found he gives calcium chlorid in large doses, in accordance, he says, with the important discoveries in this line of Halsted and Crile. He does not hesitate to give daily 5 or 6 gm. to adults and 1 gm. to new-born infants. He prescribes it as calcium chlorid, 10 parts (always adding the chemical formula, $CaCl_2$, and the warning: "Not chlorinated lime or potassium chlorate"), with syrup of peppermint or raspberry, 30 or 40 parts, and distilled water to 150 parts. He used Moser's antitetany serum in one case with apparently good results and states that he is thus the first to try serotherapy in human tetany, and also the first to treat with calcium pregnancy and puerperal tetany and tetany in the new-born. It is possible, he adds, that the parathyroids may be influenced by taking advantage of the antagonism between them and the adrenals.

Archiv für Verdauungs-Krankheiten, Berlin

XIX, No. 2, pp. 121-262

78 Mode of Action of Saline Purgatives. (Ueber die Verweildauer von Salzlösungen im Darme und die Wirkungsweise der salinischen Abführmittel.) F. Best.
79 *Acute Embolic Enteritis. C. Hart.
80 Inversion of the Viscera. (Zur Kasuistik des Situs inversus partialis abdominis.) C. Hart.
81 *Influence of Internal Treatment on Disturbance in Motor Functioning of the Stomach. (Der Einfluss der inneren Behandlung auf die Motilitätsstörungen des Magens.) S. Kemp.
82 *Extra-Anal Method of Treating Hemorrhoids. J. Maybaumm.
83 *Duodenal Ulcer. V. Plitek.
84 Technic for Endoscopy. (Einfache Methode zur Feststellung der Ursache des Versagens der elektrischen Beleuchtung eines Endoskops.) F. Ehrlich.
85 Blotting-Paper Capillary Test for Acidity in Gastric Juice. (Ueber die sogen. Kapillaranalyse vom Magensaft nach Dr. I. Holmgren.) K. Mattisson. Commenced in No. 1.

79. **Acute Embolic Enteritis.**—Hart gives an illustrated description of a case of fatal embolism in the intestines following directly on a septic sore throat in a girl nearly 7. A short bacillus was cultivated from the heart blood. This case was encountered in 1908 and there was considerable discussion whether it was not a case of variola. Quite recently he has seen a second case of the kind, confirming the previous assumption of embolic trouble in the intestines. The second patient was a robust bank clerk of 24 who died in the course of an ulcerative tonsillitis, and the findings in the intestines were similar to those in the first patient. In neither did the lymphatic system appear to be involved. In both the appendix was intact. Hart has not been able to find any similar cases on record of embolic enteritis occurring in connection with septic sore throat and accompanied by emboli in the skin.

81. Influence of Internal Treatment on Motor Functioning of the Stomach.—Kemp extols the remarkable advantages of the Bourget-Faber test-meal for estimation of the motor functioning of the stomach. It consists of oatmeal gruel, eight stewed prunes, 50 gm. chopped veal with a teaspoonful of huckleberry sauce and 2 slices of bread and butter. This meal is evacuated from the stomach by the end of five hours in normal conditions, and it is peculiarly adapted to reveal any disturbance in motor functioning, much more so than any of the other test-meals in vogue. He tabulates the findings in twenty-three patients with gastric ulcer, twenty with ptosis and atony, eleven with gastritis and thirty-two with simple atony. When there was a large amount of the meal still present in the stomach the patient was tested again the sixth, eighth or twelfth hour after the meal until the extreme limit for evacuation was determined. The contents pumped out of the stomach with the rinsing water are set aside in a cylindrical glass and the amount of solid sediment after a few hours can be recorded in c.c.

He found that the motor functioning improved under the usual treatment for the above conditions, the improvement being marked and paralleling the subjective improvement except in the cases of gastritis; this seems to be more resistant to treatment. In sixty of the eighty-five cases the retention thus determined on commencing treatment had entirely ceased by the end of the course of treatment. This favorable result was obtained not only in the mild forms of retention but even in a number of cases in which nearly all the prunes were found in the stomach after twelve hours. He records the cases as R-VIII or R-V or R-XII, expressing by this the number of hours when there was still a large amount of the food retained in the stomach, following these figures with (50) or (185) or (20) to express the number of c.c. of solid particles in the stomach content in the cylindrical glass. Even slight disturbances in motor functioning are revealed by this test-meal. The clinical experiences related show that even extreme retention for twelve hours may yet prove amenable to internal treatment.

82. Extra-Anal Non-Operative Treatment of Hemorrhoids.—Maybaumm has been applying in fifteen cases the method which Boas introduced and systematized (described in The Journal March 9, 1912, p. 742). He regards it as essential progress in the treatment of hemorrhoids, especially for patients whose condition does not permit operative measures. For solitary nodules with a long pedicle it is preferable to all other methods of treatment. He advises it as a preliminary to any operation as it may render the latter unnecessary. The patients have to stay three or four days in bed and keep quiet for another week. By the end of the second week they are free to return to business. In four cases he found it impossible to apply the technic successfully as the nodules had such a broad base.

83. Duodenal Ulcer.—In sixteen of seventeen cases of gastric ulcer, Plitek found that the condition was much aggravated by exercise while in four of thirteen cases of duodenal ulcer the patients felt better under exercise; in the other nine the pains increased with movement. In the gastric-ulcer cases the temperature in the rectum was above normal in five and also in three of ten duodenal ulcer cases. He gives the particulars of the thirteen cases: all the patients were great coffee drinkers. During the attacks of pain, it was relieved by lying on the back in eight cases and by a squatting position in three cases. One patient found the pain was relieved by pressing the stomach region against the edge of the table. He did a gastro-enterostomy in ten cases. The results have been excellent in all although the interval since has not been over six months in some of the cases. One patient died with symptoms of ileus after seven months, and necropsy revealed a cord-like adhesion between the gastro-enterostomy and the root of the mesentery.

Berliner klinische Wochenschrift

April 21, L, No. 16, pp. 717-764

86 Digitalis. (Digitalistherapie.) A. R. Cushney.
87 The Pulse at High Altitudes. (Wirkung des Hochgebirgsklimas auf die Pulsfrequenz.) E. Stern.
88 *The Prognosis in Valvular Disease. (Herzklappenfehler.) M. Heinrich.
89 *Disadvantages of Use of Scopolamin in Treatment of Morphin Addiction. F. H. Mueller.
90 *Tibialis Anticus Antagonistic Reflex. A. Piotrowski.
91 Accessory Passages in the Penis and Gonorrhea. (Ueber die accessorischen Gänge am Penis und ihre gonorrhoische Erkrankung.) Hübner.
92 *Temporary Sterilization by Walling Off the Ovary with the Broad Ligament. Blumberg.
93 Operative Correction of Deformity below the Knees. (Fall von operativ behandelter angeborener Missbildung der unteren Extremitäten.) S. Peltesohn.
94 Cancer Induced in Rats by Feeding with Nematodes. S. Löwenstein and J. Fibiger.

88. The Prognosis of Valvular Disease.—Heinrich comments on the more favorable prognosis in valvular disease which the course of time has brought. Benfey has reported five cases in which the patients lived to be 17, 20, 27, 42 and 69 years old while Cassel has reported three cases of complete recovery from mitral insufficiency in children, Gerhardt the case of a young carpenter, and Baginsky admits that valvular disease in children may completely subside. Heinrich quotes also Senator, Leyden and others who have reported cases of complete recovery from aortic disease in adults. In all these favorable cases of valvular disease in adults the patients were able to spare themselves physical efforts. He then reports the case of a woman of 54 who had aortic insufficiency left from acute articular rheumatism at 16. At the age of 24 she was demonstrated as a typical case of aortic insufficiency. At 34 she had to spend four weeks in the hospital on account of pericarditis, but during the twenty years since she has been in continued good health and working in hard domestic service. The heart shows the typical signs of insufficiency of the aortic valve, and it has thus lasted for thirty years without impairing the general health. Heinrich knows of only one instance of such long survival on record.

89. Injury from Narcotics in Treatment of Morphin Addiction.—Mueller protests against a recent work which advocates keeping the patients under the influence of scopolamin in curing them from morphin addiction. He insists that any narcotic is not only superfluous but often does great harm under these circumstances.

90. The Anticus Reflex and Antagonistic Reflex.—Piotrowski called attention to the reflex dorsal flexion and supination of the foot when the tibialis anticus is tapped as described in The Journal, Jan. 25, 1913, p. 326. Further study of this reflex has shown that with organic disease of the central nervous system it is liable to elicit also or solely an antagonistic plantar flexion of the foot or toes. He found this reflex pronounced in six of nineteen patients with organic disease of the central nervous system; twice it was accompanied by the anticus reflex. In four cases of multiple sclerosis there was plantar flexion of the foot to the right or left on tapping the tibialis anticus; also in a case of myelitis and in a case of vertebral disease. In one of the multiple sclerosis cases the disease was in its incipiency, and the antagonistic flexion was the only pathologic reflex to be elicited in the leg; this case shows that the phenomenon may be an early sign of organic trouble.

92. Temporary Sterilization of Women.—Blumberg has applied a technic in six cases which effectually prevents conception while at the same time normal conditions can be restored at any moment when desired. The ovary is buried in a pocket made for it by turning up over it that part of the broad ligament of the uterus between the fallopian tube and the ligament of the ovary, suturing the free edges of this ala vespertilionis to the rear of the uterus, leaving the tube free in the peritoneal cavity. As the ovary lies behind the broad ligament it is thus completely imprisoned. The ovary is freely movable in this pocket as only the edges of the broad ligament are sutured, and at any moment the sutures can be taken out and the ovary released. He has done the operation by the vaginal route to date. In his six patients thus operated on there has been no disturbance at any time since; menstruation continues the same as before the operation. The longest interval since has been two years.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 19, XLIII, No. 16, pp. 481-512

95 Hospital Experience with Typhoid During Forty-Six Years. E. H. Burckhardt.
96 Hematuria Five to Ten Days after Sterilization of Skin with Benzine. (Benzin und Toilette.) C. Roux.

Deutsches Archiv für klinische Medizin, Leipsic

CX, Nos. 3-4, pp. 189-412. Last indexed May 18, p. 1501

97 *Formation of New Blood at High Altitudes. (Höhenclima und Blutneubildung.) F. Laquer. (Blutbildung im Hochgebirge.) O. Cohnheim and O. H. Weber.
98 Tuberculosis and Calcium Metabolism. (Zur Lehre des Kalkstoffwechsels. I.) N. Voorhoeve.
99 Metabolism under Hypophysis Treatment. (Wirkung des Extraktes aus dem Infundibularteil der Glandula pituitaria unter pathologischen Verhältnissen.) A. Elfer.
100 Nutrient Enemas Containing Simple Digestion Fragments. (Ueber Nährklistiere mit Eiweissabbauprodukten und deren Einfluss auf den respiratorischen Stoffwechsel und die Wärmeproduktion.) P. Schöpp.
101 Tolerance for Galactose Introduced Directly into Portal Circulation. H. Wörner.
102 *Experimental Research on Intravenous Dosage of Diphtheria Antitoxin. (Wirksamkeit grosser Serumdosen bei der Diphtherievergiftung.) C. Schöne.
103 Intravenous Administration of Strophanthin. (Beitrag zum Ausbau der intravenösen Strophanthintherapie.) O. Thorspecken.
104 No Probable Connection Between Endemic Goiter and Radio-Activity of Drinking Water. (Beziehungen zwischen Kropfendemie und Radioaktivität.) E. Hesse.
105 High Lymphocytosis Connected with Infections. F. Marchand.
106 Addison's Disease. J Löwy.
107 The Energometer and Sphygmobolometer. (Neue Experimente zur dynamischen Pulsdiagnostik.) T. Christen.
108 Amount of Blood Expelled from Heart at Each Beat. (Zur Frage des Herzschlagvolumens.) O. Müller and K. Vöchting.

98. **Influence of Altitude on Blood Production.**—Laquer made a study of his blood for some weeks at a low altitude and then during four weeks at a height of about 9,000 feet. Both the red blood count and the hemoglobin began to rise slowly during the second week and on the fifteenth day reached their maximum, the red cells having increased 15 per cent. and the hemoglobin 16 per cent. After his return to the lowland the red cells decreased suddenly and the hemoglobin gradually down to their original level. Six dogs were bled until about half the blood volume was removed and then they were taken to the 9,000-foot altitude. The restoration of the normal blood-volume required sixteen days, while six dogs kept at the lower level required for this twenty-seven days, or 70 per cent. more. He is inclined to ascribe the blood-regenerating power to the low oxygen pressure.

Cohnheim and Weber in order to determine whether there is an actual increase in blood formation at high altitudes, examined repeatedly the blood of twenty-three men who had worked for fourteen years on the Jungfrau railroad at altitudes of from 9.000 to 11,000 feet. Both red cell count and hemoglobin were decidedly increased over the normal for healthy men at lower levels. Tables are given showing their results. (See also Berlin Letter, p. 1554.)

103. **Large Doses of Antitoxin in Diphtheria.**—There has been much discussion as to the efficacy of large doses of antitoxin in the treatment of diphtheria, some authors maintaining not only that large doses were no more effective than moderate ones, but that they were positively harmful. Schöne concludes from a series of intravenous injections of antitoxin in guinea-pigs that very large doses have no harmful effects and that by their use many patients with severe infection can be saved that would die with smaller dosage, particularly if the antitoxin is not given early.

Deutsche medizinische Wochenschrift, Berlin

April 17, XXXIX, No. 16, pp. 729-776

109 *Puerperal Inversion of the Uterus. W. Zangemeister.
110 *Tubercle Bacilli in the Blood Stream. (Tuberkelbazillen im strömenden Blut.) E. Fränkel.
111 Action of Serum and Toxin Administered by the Rectum. G. Shibayama.
112 *Serum-Anaphylaxis. (Wiederholte Seruminjektionen und Ueberempfindlichkeit—Serumanaphylaxie.) M. Nemmser.
113 Experimental Cholesterinemia. (Die pathologischen Veränderungen innerer Organe bei experimenteller Cholesterinesterverfettung.) N. Anitschkow.
114 Diaphragm Hernia? (Hernia diaphragmatica oder einseitiger Zwerchfellhochstand?) Reuss.
115 Pectineal Hernia. (Entstehung der Hernia pectinea.) O. Harzbecker.
116 Injury from Old Novocain Solution. (Gewebsnekrose und arterielle Arrosionsblutung nach Anwendung alter Novokainlösungen zur Infiltrationsanästhesie.) v. Gaza.
117 Bacillary Fragments in Tuberculous Sputum. (Ueber "Splitter" im Sputum von Phthisikern.) A. Forbat.
118 The Fever with Mucous Colitis. (Die Febris intermittens perennis der Colitis mucosa.) M. Couto.

April 24, No. 17, pp. 777-824

119 Gangrene of the Lung. G. Treupel.
120 Improved Technic for Diagnosis of Diphtheria. (Erfahrungen mit den Tellurnährböden bei der bakteriologischen Diphtheriediagnose.) W. Schürmann and E. Hajos.
121 Research on Thorium X. (Die Thorium X-Wirkung auf das Blutzellenleben.) Arneth. Commenced in No. 16.
122 Bacillus causing Multiform Erythema. (Zur Actiologie des Erythema exsudativum multiforme.) K. Saisawa.
123 Sources of Error in Wassermann Reaction. (Ueber "eigenlösende" Eigenschaften des Meerschweinchenserums und dadurch bedingte Fehlerquellen der Wa. R.) A Zaloziecki and E. Jolowicz.
124 Moving Pictures of the Heart. (Die kombinierte Herzröntgenkinematographie und Elektrokardiographie.) T. and F. Groedel.
125 "Human Aquariums." E. Holländer See Abstr. 93, p. 1037.

109. **Puerperal Inversion of the Uterus.**—Zangemeister comments on the extreme rarity and severity when it does occur of inversion of the uterus at childbirth. Thorn has compiled 620 cases recorded in the last twenty-two years, in connection with childbirth in 543 cases, with myoma in seventy-nine, with other tumors in four and the inversion occurred without known cause in thirteen. The great danger is from shock and hemorrhage. The shock may prove fatal without much hemorrhage, and shock may occur even during reduction. Over 4 per cent. in 374 cases died exclusively from the shock and 5.9 per cent. from the immediate hemorrhage. No case of air embolism is known, and only 2 per cent. of the women succumbed to sepsis, directly connected with the inversion. The total mortality of recent puerperal inversion is thus 15.8 per cent., but forty-six other women died from the indirect consequences, pulmonary embolism or other cause. The inversion became spontaneously reduced in 3 per cent. of the 374 cases. Treatment should aim to correct the inversion and check the hemorrhage; the latter can be readily done by imitating nature's process of compressing the pedicle by muscular spasm or a ring of engorged vessels, like a paraphimosis. An elastic band can be passed around the base of the uterus as it lies in the vagina, and thus arrest the hemorrhage by compression just tight enough to accomplish this and no more; it should be removed as soon as possible. Done in this way all hemorrhage is arrested and there is no danger of gangrene. If the inversion is not complete, the vagina should be tamponed to arrest the hemorrhage, possibly suturing the vulva as a temporary expedient. It might be advisable to make the inversion complete and then treat it as above. He gives minute directions for reduction of the inverted uterus, the patient on her back with the pelvis raised. No instrument should be used; beginning near the orifice of one tube, with the tips of the fingers, bunched, the uterus is pushed in. funnel-shaped, gradually working the fingers farther in with counter-pressure from the rest of the hand. The great obstacle is the ring of constriction at the base. All should be done under general anesthesia.

Statistics have shown the surprising fact that the outcome is far better when the patient is allowed to recover from the shock before attempting reduction. From the third to the twelfth hour after the inversion is thus the propitious time for reduction. In 158 cases in which the reduction was attempted at once it succeeded in only 76 per cent. of the cases; it failed in 24 per cent., and 23 per cent. of the patients died. When the reduction was not attempted until after from one to fourteen days, there were 40 per cent. failures and 20 per cent. deaths. On the other hand. when the reduction was not attempted until from one to twenty-four hours after the inversion it succeeded in all but 14 per cent. and there was no mortality. In the majority of cases the inversion was due to pulling on the placenta before it had separated and while the uterus walls were relaxed, not in contraction. The inversion is much more liable to occur when the traction is straight downward, the placenta implanted on the fundus. Reduction is easier of course, the less there is to reduce, and consequently the placenta should be removed, but great care is necessary as the inverted uterus is easily injured. After separation of the placenta it is better to wait a while to allow the uterus to recuperate from the mechanical irritation. The colpeurynter is useful in the old cases but not in the recent, except possibly in place of tamponing the vagina in cases of incomplete inversion. Operative measures should be restricted to cases in which reduction has not been possible in the course of the first twelve hours.

110. **Tubercle Bacilli in the Blood-Stream.**—Fraenkel states that microscopic examination of the blood for tubercle bacilli is liable to prove misleading and that inoculation of animals is the only reliable criterion. Of the twenty-five persons he examined, only two gave positive results in the forty-two animal inoculations. One was a woman with advanced pulmonary tuberculosis, the other a man with chronic bronchitis, no tubercle bacilli in sputum or blood.

112. **No Anaphylaxis to Diphtheria Antitoxin.**—Nemmser states that no signs of anaphylaxis developed in the course of his extensive experience with preventive injection of antitoxin in four years at the St. Petersburg Hospital for Infectious Disease. He has been studying 3,000 case records of scarlet-fever patients, the rule being to make a preventive injection on reception of every scarlet-fever patient as secondary infection is so common; measles, diphtheria, erysipelas, or mumps developing in 1 per cent. of all cases. He found 1,002 records of cases in which more than two preventive doses of the serum had been injected, in some up to five. Serum exanthems developed in forty-two cases but never anything to indicate anaphylaxis as he retrospectively analyzes the cases.

Medizinische Klinik, Berlin

April 20, IX, No. 16, pp. 611-652

126 *The Diet in Diabetes. C. v. Noorden.
127 Pathology of Breast-Fed Infants. (Ernährungs- und Entwicklungsstörungen beim Brustsäugling.) Friedmann.
128 *Surgery of the Prostate. (Ein Jahr Prostatachirurgie.) M. Wilms.
129 *Urobilinogen Reaction in the Urine Early in Scarlet Fever. (Urobilinogenreaktion im Harne Scharlachkranker.) C. Schelenz.
130 *Oxyuris Appendicitis. (Vorkommen der Oxyuris vermicularis im erkrankten exstirpierten Wurmfortsatze des Erwachsenen.) Rheindorf.
131 National Parks. (Ueber Naturschutz und Naturdenkmalpflege.) W. Wangerin.

126. **The Diet in Diabetes.**—At the recent International Physiotherapy Congress von Noorden discussed the principles for modern dietetic treatment of diabetes with exact details. In conclusion he emphasized that no other chronic disease is so much under our control as diabetes, aside from the unconditionally malignant and very far advanced cases. He deplores that it so often happens that systematic treatment is not considered necessary in the early stages, and much time is wasted and the disease allowed to progress to a severe form by inadequate measures. Some rely on courses of mineral waters at spas, trusting to them to bring absolution for the dietetic sins of the home life; some waste time and money on quacks, patent medicines, and the so-called antidiabetic specialties advertised in such profusion. At best, these proprietaries are harmless drugs sold with directions for strict regulation of the diet The proprietary medicine with its alleged miraculous powers is only the business appendix; the active factor is the regulation of the diet. The patient's physician may not have ventured to impose such stringent dietetic restrictions, but the quacks do not hesitate to insist on them, and with disastrous audacity in many cases. He reaffirms the importance of beginning an energetic individualizing dietetic treatment of diabetes in the early stages of the disease. This is the time when, according to the patient's regulation of his diet, all may yet be won and all may be lost. When this principle is universally recognized it will be appreciated that the prognosis of diabetes is much more favorable than that of any other chronic disease and we will rarely encounter it in a severe form.

128. **Prostatectomy.**—Wilms states that he has done perineal prostatectomy in forty-three cases without a fatality. He believes that in scarcely any surgical field has there been such improvement as in prostate operations in the last decade.

129. **Urobilinogen Reaction in the Urine in Scarlet Fever.**—Schelenz expatiates on the importance of the dimethylamidobenzaldehyd reaction in the urine as a very early sign of scarlet fever. He obtained a positive reaction almost constantly in the early cases. The negative findings which some have reported were probably due to the presence of formaldehyd in the urine from preceding hexamethylenamin medication. Hexamethylenamin does not always split off formaldehyd in the urine, and consequently some patients who had taken it gave a positive reaction to the test for urobilinogen, but as a rule when a patient has taken this drug the urine test is negative.

130. **Oxyuris Appendicitis.**—Rheindorf concludes from his study of thirteen cases of appendicitis in persons harboring the oxyuris that chronic discomfort in the appendix region in adults, especially sharp pains, increasing during exercise, should suggest the possibility of oxyuris infection. Even when no signs of the parasite are evident in the stool they should be given a course of treatment for the helminthiasis; it should be arrested at once if signs of acute febrile appendicitis develop. He urges examination of every appendix after removal to determine the presence of helminths.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXVI, No. 1, pp. 1-196. Last indexed April 5, p. 1115

132 *Action of Pathologic Kidney on its Mate. (Experimentelles über die Einwirkung einer lädierten Niere auf die Niere der anderen Seite.) K. Isobe.
133 *Chronic Pancreatitis. A. Schmidt.
134 Fat Embolism Outside of the Lungs and its Causes. (Die Fettembolie des grossen Blutkreislaufes und ihre Ursachen.) C. Fromberg.
135 Megacolon. (Zur Diagnostik der Hirschsprungschen Krankheit.) L. Frank.
136 White Bile. (Zur Frage der Entstehung der sog. weissen Galle bei absolutem dauernden Choledochusverschluss.) J. Bertog.
137 *Blood Count in Appendicitis. (Die heutige Bewertung der Blutuntersuchungen bei der Appendicitis bzw. freien fortschreitenden appendicitischen Peritonitis.) W. Schultze.
138 Roentgenoscopy in Diagnosis of Duodenal Disease. (Die Leistungsfähigkeit der Radiologie in der Erkennung von Duodenalerkrankungen, besprochen auf Grund von Erfahrungen an 31 operierten Fällen.) C. Müller.
139 Abscess in Omentum Sac after Necrosis of the Pancreas. A. Bittorf.
140 Surgery of Tumors in the Cerebellopontine Angle. (Kleinhirnbrückenwinkeltumoren.) H. Marx.
141 Experimental Colon Bacillus Infection of the Urinary Organs. O. Hess.
142 *Modification of Digestive Processes after Operations on the Stomach. (Aenderungen in den Verdauungsprozessen nach Gastroduodenostomie und Gastrojejunostomie, and nach totaler Magenexstirpation.) W. F. Dagaew.

132. **Action of Pathologic Kidney on Its Mate.**—Isobe reports experimental research which apparently demonstrates that the products generated in the pathologic kidney are absorbed and exert a toxic action on the epithelium of the sound kidney when these products are eliminated through it; they may also injure the parenchyma. In case the products are not very toxic, the sound kidney responds merely with a tendency to hypertrophy. The research reported seems to indicate that the toxic action is felt by the kidney alone. The practical conclusion is that the pathologic kidney should be got rid of as soon as possible before the other kidney has been extensively damaged.

133. **Chronic Pancreatitis.**—Schmidt has encountered a number of cases of chronic pancreatitis, and he insists that uncomplicated chronic pancreatitis belongs to the internist, not to the surgeon, and that it responds well to treatment as a rule. He does not apply the alleged specific tests for pancreafunctioning but relies on clinical observation and microscopic examination of the stools on his special test-diet. With merely functional disturbance the pancreas seems to suffer

more than with an organic lesion, the interference with digestion being more striking and severer than with a tumor, for instance, which arrests the functioning in a portion of the organ but leaves the rest practically intact for a long time. He describes in detail eight typical cases of chronic pancreatitis. In three the bulky and greasy stools suggested an affection of the pancreas interfering with the digestion of fat and meat and also to a slight extent with that of starch. The disturbance in pancreatic secretion was evidently responsible for the variable subjective phenomena from abnormal digestion and for the intermittent catarrh of the bowels manifested in diarrhea, colics, passage of mucus and occasional transiently high temperature. The large amounts of meat fibers which escaped digestion provided a good culture medium for putrefaction-inducing microbes and the undigested starch for fermentation microbes. Bile production and stomach functioning were apparently normal.

The affection began in one case with an attack of ileus, accompanied by brief jaundice, followed by a left pleural effusion, the whole probably an acute pancreatitis which subsided into a chronic phase. Another patient had had a severe hematemesis six years before and the stomach was drawn toward the right and was rather large, suggesting an ulcer in the pylorus or duodenum as the primary cause for the disturbances. In a fourth case a gall-stone affection became complicated with a transient disturbance in pancreas functioning, all symptoms subsiding under treatment of the gall-stone trouble. In case of achylia, the lack of the normal stimulus from the gastric juice leads in time to insufficiency of pancreatic digestion, and the functional trouble may finally entail chronic inflammation of the pancreas. Chronic disturbance in the stomach secretion must thus be reckoned with as a possible factor in chronic pancreatitis. Obstruction of the outlet of the pancreas may lead to isolated pancreatitis with a fatal outcome. In a case of this kind reported the digestive disturbances were remarkably slight but there was intense glucosuria. Still another factor in chronic pancreatitis is a primary cirrhosis of the organ. This generally entails rapid cachexia. In one such case a man of 57 had pain in the stomach region; the acidity of the stomach contents was high and there was a tendency to diarrhea. The stomach was not tender or enlarged but quantities of undigested meat fibers and fat were found in the stools and the patient grew rapidly very thin and feeble. There was no glucosuria at any time. Necropsy showed extensive cirrhosis of the pancreas with a few small abscesses; no stones anywhere. The whole trouble was restricted to the pancreas and ran its course within a year.

Treatment should be based on the findings in the stools on the test-diet, restricting the fat (no butter, cream, very little milk), and the most minute division of all the meat and egg eaten. Schmidt has found gelatin dishes extremely useful as gelatin makes but slight demands on pancreas functioning and gives very little occasion for putrefaction processes. Arrow-root, sago, fine bread, rice and mashed potato should be the main reliance; vegetables should be allowed only with control of their digestion by examination of the stools. In case of atony of the stomach, lavage in the morning may be indicated. A course of mineral waters is not needed for the pancreatitis but may be indicated in case of concomitant gall-stone trouble. It might be advisable in some cases, he adds, to supplement the above measures with pancreas preparations; they may help in some cases but they fail in others, according to his experience.

137. **The Blood Count in Appendicitis.**—Schultze regards the quantitative and qualitative blood count as extremely important, and he applies it at once as a routine measure in all cases of appendicitis. He depends on it in large degree for the prognosis, especially with *progressive* peritonitis. Here it affords exceptional insight into the case.

142. **The Digestion after Operations on the Stomach.**—Dagaew gives a detailed description of numerous experiments on dogs after gastroduodenostomy, gastrojejunostomy or total gastrectomy to determine the conditions in regard to digestion of various articles of food. The tables show that the animals utilized their food thereafter surprisingly well.

Monatsschrift für Geburtshilfe und Gynäkologie

April, XXXVII, No. 4, pp. 417-552

143 *Uterine Hemorrhage. (Zur Lehre von der Aetologie und Therapie der Uterusblutungen.) L. Hirsch.
144 Pubiotomy. (Zur Frage von der Hebosteotomie.) L. A. Kriwsky.
145 *Development of Prematurely Born Children. (Weiterentwicklung frühgeborener Kinder, mit. bes. Berücksichtigung späterer nervöser psychischer und intellektueller Störungen.) M. Wall.
146 Hemophilia in Women. A. Czyborra.
147 Roentgenotherapy or Vaporization in Treatment of Hemorrhagic Uterus Disease. H. Fuchs.
148 Repeated Tubal Pregnancy. (Wiederholte Tubargravidität.) M. Hirsch and E. Puppel.

143. **Etiology and Treatment of Uterine Hemorrhage.**—Hirsch believes that menorrhagia and metrorrhagia are caused not by variations in ovarian secretion but by decreased contractibility of the uterine musculature. He has therefore treated 200 patients by injection of ergot directly into the uterine wall. Excellent results were obtained, particularly in chronic metritis and preclimacteric hemorrhage. Naturally the treatment is contra-indicated in acute inflammatory conditions and new growths of the uterus and adnexa.

145. **The After-Life of Premature Infants.**—Wall's conclusions are based on a study of 691 cases He finds that contrary to a frequently accepted belief, premature birth is not responsible for Little's disease, idiocy or imbecility. Prematurely-born infants develop, as a rule, into normal adults, though in their early years there is apt to be some retardation, manifested by delay in learning to walk and speak, and persistence of enuresis and night terrors. The severity and persistence of this retarded development depend on the size of the infant at birth, and the extent to which it has suffered after birth from poor care and lack of hygiene.

Monatsschrift für Kinderheilkunde, Berlin

XI, No. 12, pp. 621-682

149 *Inexpensive Modification of Protein Milk. (Die kaseinfettangereicherte Kuhmilch als Dauer- und Heilnahrung.) P. Heim and M. K. John.
150 Anaphylaxis to Milk. H. Kleinschmidt.

149. **A New Milk Modification.**—Heim and John have used what they call casein-fat milk for the feeding of both healthy and dyspeptic infants. In 145 cases of dyspepsia it gave excellent results. They fed forty-five healthy infants with it from the age of two weeks to seven or eight months. All were evidently in as good condition as if they had been fed with mother's milk. The casein-fat milk is prepared by adding two teaspoonfuls of extract of rennet to two-thirds of a liter of cow's milk and heating it in hot water to 40 C. The coagulated milk is stirred up and poured in a fine sieve and the whey allowed to drain off. Two-thirds of a liter of hot water is added to the coagulated part and it is rubbed through the sieve. This process is repeated until the fluid has the consistency of milk and runs through the sieve without rubbing. It is then heated to not over 88 C. being stirred continuously to avoid coagulation of the casein. After heating, one-third liter of cow's milk, which has been heated, and 30 gm. Soxhlet's sugar is added and it is kept in the refrigerator until wanted. It has the advantage over albumin milk or protein milk of being cheaper, and it can be prepared at home by mothers of ordinary intelligence

Münchener medizinische Wochenschrift

April 22, LX, No. 16, pp. 849-904

151 *Increased Irritability of the Neuromuscular System in Pregnancy. (Ueber galvanische Nervenmuskelerregbarkeit in der Schwangerschaft und über Schwangerschaftstetanie.) L. Seitz.
152 *Constitutional Inferiority of the Connective Tissue. (Die allgemeine Asthenie des Bindegewebes in ihren Beziehungen zur Wundheilung und Narbenbildung.) K. Vogel.
153 *Extensive Exposure of Inoperable Gastric Cancer to Permit Roentgenotherapy. (Freilegung inoperabler Magenkarzinome zur Röntgenbestrahlung und die damit erzielten Erfolge.) H. Finsterer.
154 Seriodiagnostic Reactions Simulated by Means of Chemicals. (Ueber Erzeugung von Komplementbindungsreaktionen durch Zusatz von chemischen Substanzen zum normalen Serum.) E. Rominger.

155 Brow Presentations. (Behandlung der Vorderhauptslagen.) Leble.
156 *Necessity for Removing Tonsil in Treating Tuberculous Lymph-Nodes in the Neck. (Halslymphdrüsentuberkulose in ihrer Beziehung zu den Tonsillen und zur Lunge.) E. Trautmann.
157 *Malignant Pemphigus Cured by Intravenous Injection of 20 c.c. Fresh Human Serum. G. Praetorius.
158 *Technic for Determining Blood Pressure. (Neue Apparate zur Messung des arteriellen Blutdrucks beim Menschen.) H. v. Recklinghausen. Commenced in No. 15.
159 Etiology of Beriberi. C. Eijkman.
160 No Scientific Basis for Phrenicotomy. (Die Beeinflussing von Lungenerkrankungen durch künstliche Lähmung des Zwerchfells. Phrenikotomie.) D. Hellin.

151. **Increased Electric Irritability in Pregnancy.**—Seitz states that tests of forty healthy young women and of seventy pregnant women showed increased irritability to galvanic stimulation during the last *months of pregnancy*. During the puerperium the excitability gradually subsided. None of the women showed signs indicating tetany or a latent tendency thereto but the electric findings indicated a subtetany. Among the women there were four with eclampsia and two of these showed this tendency while in the others the electric tests indicated normal conditions. Seitz remarks that pregnancy tetany is distinguished by unusual severity; about 6 per cent. of the women die. The respiratory muscles suffer more in pregnancy than under other conditions. In treatment he has *found the best results from keeping the women in bed.* Thyroid treatment had but a dubious effect and trials of parathyroid extract are still under way. He ascribes to a latent tendency to tetany the peculiar attacks of asthma with nausea and the tremor which occur in pregnant women. (He makes no mention of calcium as a possible treatment of the tetany. —See Abstr. 76 above.)

152. **Constitutional Inferiority of the Connective Tissue.**—Vogel has been studying for nine years the connection between various affections such as *flat-foot, varices, pendulous belly,* ptosis, etc., and tardy healing of wounds and tardy consolidation of fractures. His experiences show that these all have a *common basis in a constitutional inferiority* of the connective tissue. In sixty-two cases summarized this connection was unmistakable. For example, a man of 27 with fracture of the femur showed no signs of callus after four months. He had flat-foot, inguinal and femoral hernia, gastroptosis and scoliosis. A young woman with varices, hernia and flat-foot burned the calf of one leg and the wound did not heal over for seven months. A child of 9 had a rather small wound of the calf which showed no signs of healing over for several months and finally required transplantation of flaps; the child was pale and had a tendency to hernia and his parents had hernias, varices, hemorrhoids, or curvature of the spine. Vogel urges that greater attention should be paid to this constitutional inferiority of the connective tissue, or tissue asthenia, as it will be of great aid in prognosis and in estimating the advantages of operative *measures*. Patients belonging in this category should be kept in bed longer after an operation than others, and the operative wounds should be reenforced more carefully. A suture material should be selected that is not absorbed too soon, and all the factors to ensure *smooth* healing of the wounds and good cicatrization should be heeded with special care.

153. **Roentgenotherapy of Inoperable Cancers.**—Finsterer applies an *extremely* radical technic for exposing an inoperable cancer in the stomach to the Roentgen rays and reports excellent results. After the median laparotomy under local anesthesia, he makes a gastro-enterostomy as far to the left as possible and *then* cuts both rectus muscles across, two or three fingerbreadths above the umbilicus, carrying the incision down to the costal arch and thus making a wide opening in the abdomen which leaves the stomach, its omentum and the gastrocolic ligament amply exposed. He packs around them with gauze to induce formation of adhesions. Five or six days are generally enough for this. No tendency to peritonitis or prolapse developed in the seven cases in which he has applied this technic. Under local anesthesia resection may be possible in conditions which forbid general anesthesia. Roentgenotherapy may be usefully applied after resection with or without extensive exposure for the purpose. In inoperable cases this radical exposure should be *done as a routine* measure in place of an *exploratory laparotomy*, and the gastro-enterostomy should *follow*, made as far toward the fundus as possible, regardless of the permeability of the pylorus. *If* this technic is not applicable, jejunostomy should be done. This *method of* radical exposure permits successful treatment of even immovable carcinoma in the posterior wall of the stomach. To prevent a fistula, anything liable *to injure* the serosa *of* the *stomach, suture or* exploratory excision should be scrupulously avoided and the dosage of the rays should be mild, not over *one or two* H units. The Roentgen exposures should be kept up a long *time*, and *possibly they may* be effectually supplemented by chemical treatment.

156. **Tuberculous Lymph-Nodes in the Neck Infected from the Tonsil.**—Trautmann is *convinced that the cervical lymph-nodes are infected through* the mediation of the tonsils in many cases, and insists that the tonsil on that side at least should be *removed as the first step in treatment.* In *one* of the cases he reports the tonsils were apparently sound but tuberculous changes were found in them resembling those in the tuberculous lymph-nodes in the neck on the same side.

157. **Serotherapy of Pemphigus.**—In the case described a woman of 48 had suffered for two years from severe and constantly recurring pemphigus rebellious to all treatment. including salvarsan. She was emaciated to a skeleton, with fever and occasional delirium and diarrhea and had been unable to leave her room for two months when he made an intravenous injection of 20 c.c. of blood taken directly from the woman's husband. No attempt was made to defibrinate or centrifugate as the little operation had to be done in her home. No by-effects were observed, but the curative action was amazing. By the third day the manifestations of the disease began to subside and by the end of the week recovery was *complete* and she started on a journey the third week. There has not been the slightest sign of recurrence of symptoms during the nearly eight months to date. The *skin over the entire body* seems *normal and the patient has gained 18 pounds in weight.* No local measures were applied *with the serotherapy.*

158. ***Improved Apparatus for Blood-Pressure Measurement.***—Recklinghausen gives an *illustrated description of his* improved cuff, tonometer and bulb contrivance which is much simpler, cheaper and takes up less room than his old apparatus with its pump. He describes in particular the device with which he ensures uniform action *from* the rubber bulb, transforming the jerky action of the bulb into an even force.

Petersburger medizinische Zeitschrift

April 28, XXXVIII, No. 8, pp. 93-102

161 Treatment of Ankylosis of the Elbow. (Ueber Mobilisierung des ankylotischen Ellbogengelenks durch freie Periosttransplantation.) W. Greiffenhagen.
162 Physical Laws Regulating the Circulation. (Der Wasserumlauf im Blutgefässsystem und in den Geweben des Organismus.) B. Nikolaew.
163 *Biologic Importance of Phosphorus for Growing Organism and its Action on the Intracellular Ferments. M. S. Maslow.

163. **Biologic Importance of Phosphorus.**—Maslow reports extensive research on dogs carried out at the Institute for Experimental Medicine at St. Petersburg. A number of litters of puppies were fed with phosphorus in various forms or with food intentionally selected for its lack of phosphorus especially albumin-milk. The action of ferments was supervised with special interest and finally the phosphorus content of the various organs was determined. The results of the research *sustain* the assumption of the importance of phosphorus for normal ferment production and action. Also that animals are incapable of synthesizing organic phosphorus compounds. The practical conclusions are that phosphates should not be *given for* therapeutic purposes. Lecithin, on the other hand, answers the requirements for administration of phosphorus and activation of the ferments. Maslow declares that *lecithin* decisively established its usefulness as a readily assimilated form of phosphorus. When given with the food the organs showed a marked increase *in* their content of organic phosphorus and a slight increase in the *inorganic.*

Virchows Archiv, Berlin

April, CCXII, No. 1, pp. 1-160

164 Research on Development of the Skull. II. (Das fötale Wachstum.) R. Thoma.
165 Defective Development of the Chest. (Zur formalen und kausalen Genese der Brustmuskel- und Brustdrüsen-Defekte.) E. Walther.
166 Case of Fibroxanthosarcoma. (Ueber eine Fibroxanthosarkom mit eigenartiger Ausbreitung und mit Vena cava sup. sinistra.) A. Dietrich.
167 *Solubility of Gall-Stones. (Die Lösungsmöglichkeit der Gallensteine.) v. Hansemann.
168 Experimental Alimentary Atherosclerosis. W. Steinbiss

167. **Solubility of Gall-Stones.**—Hansemann has apparently proved by experiments *in vitro* and by transferring gall-stones from human beings to dogs that gall-stones are soluble in normal bile, particularly stones composed largely of cholesterin. If, therefore, by treatment the catarrhal conditions of the bile passages can be cured, inflammatory products removed and the bile restored to its normal condition, the stones will be dissolved spontaneously. Treatment should be undertaken with this aim in view, rather than with a view to direct action on the gall-stones. The article is accompanied by a number of illustrations showing sets of gall-stones in various stages of being dissolved, the research reported establishing once more that normal bile under normal conditions does not permit concrements to develop and will dissolve in time those already formed. The peculiar shape of the gall-stones found at the operation in many cases is due to their being partly dissolved.

Zeitschrift für Kinderheilkunde, Berlin

VI, No. 4, pp. 253-374. Last indexed April 26, p. 1337

169 Standards for Growth of Children and their State of Nourishment. (Eine einfache Tafel zur Bestimmung von Wachstum und Ernährungszustand bei Kindern.) C. v. Pirquet.
170 Tuberculous Meningitis; History, Symptoms, Prognosis. Literature. H. Koch.

Nos. 5-6, pp. 375-518

171 Metabolism of Atrophic Infants. (Stoffwechsel atrophischer Säuglinge.) A. Niemann.
172 Electrocardiagrams of Weakly Infants. C. T. Noeggerath.
173 Physiology of Lactation. K. Bamberg.
174 Rosenbach's Tuberculin in Treatment of Tuberculosis in Children. C. Beck.
175 *Sugar in Infant Feeding. (Zur Frage des Zuckerzusatzes bei der unnatürlichen Ernährung.) B. Bendix.
176 Continuous Intubation with Stenosis of the Larynx of Diphtheric Origin. Brückner.
177 *Reaction in Children to Human and Bovine Tuberculin. C. Cattaneo.

175. **The Best Sugar in Artificial Feeding.**—Bendix believes that beet sugar is to be preferred to milk sugar in preparing cow's milk for infant feeding. Its very much lower price is worth considering in poor families, but, in addition to that, infants actually increase more in weight on beet sugar. There is less intestinal fermentation and the stools are better. He gives weight curves for thirteen cases supporting his views.

177. **The Reaction of Children to Human and Bovine Tuberculosis.**—Cattaneo reviews the discussions as to the identity of human and bovine tuberculosis and gives his own results in a series of forty-five cases of tuberculosis in children treated with both human and bovine strains of tubercle bacilli. He found that cases of bone, bowel and gland tuberculosis reacted much more frequently and readily to the bovine tuberculin, while, on the contrary, a larger percentage of pulmonary cases reacted to the human form.

Zeitschrift für klinische Medizin, Berlin

LXXVII, Nos. 3-4, pp. 145-354. Last indexed April 5, 1913, p. 1116

178 *Why Blood Annuls Toxic Action of Atropin. (Zum Mechanismus der Atropinentgiftung durch Blut und klinische Beobachtungen über das Vorkommen der Entgiftung.) A. Döblin and P. Fleischmann.
179 The Mechanism of the Polyuria in Diabetes Insipidus. (Zur Frage des Konzentriervermögens der Niere beim Diabetes insipidus.) Forschbach.
180 Experimental Research on Nature and Cause of Recurrences. F Rosenthal.
181 Active Expiration as Sign of Nephritis. H. K. Barrenscheen.
182 *Spasmophilia in Adults. G. Peritz.
183 *Metastatic Tumors in the Skin. (Einige metastatische Hauttumoren.) S. Laache.
184 Types of Respiration in Health and in Acidosis (Ueber Atmung des gesunden und säurevergifteten Menschen.) Röver.
185 *Study of Kidney Functioning in Nephritis. (Funktionelle Untersuchungen bei den Nephritiden des Menschen.) W. Wolffheim.
186 Necropsy Blood Findings in Diphtheria. (Beiträge zur Diphtherie mit bes. Berücksichtigung der path.-anat. Organ- und bakt. Leichenblutbefunde in ihrem Verhalten zum klinischen Bilde.) W. H Leede.
187 Elimination of Amino-Acids in Health and Disease. (Studien über Aminosäurenausscheidung bei Gesunden und Kranken.) M. Damask.

178. **Neutralizing Toxic Action of Blood in Respect to Atropin.**—The research reported seems to indicate that the substance in rabbit serum which annuls the toxic action of atropin is of the nature of a ferment. The reaction was positive in 30 per cent. of ten patients with exophthalmic goiter and in 15 per cent. of twenty with ordinary goiter; it was never found in the twenty persons with apparently normal thyroids.

180. **Nature of Relapses.**—Rosenthal thinks that much light will be thrown on mutation of pathogenic germs and the problems of heredity of acquired properties by research on the nature and cause of relapses and recurrences. It seems evident that under the influence of the antibodies generated in an acute infection the causal germs undergo some modifying action, so that they start up new phenomena of a different nature: the so-called relapses or recurrences.

182. **Spasmophilia in Adults.**—Peritz applies this term to a constitutional anomaly consisting of an abnormally ready response on the part of the nervous and muscular system, particularly the autonomic nervous system, to stimuli affecting them. This constitutional anomaly is characterized by increased irritability to anodal electric stimuli (Pirquet); by the Chvostek symptom; by exaggerated mechanical excitability (long lumps in the muscles and grooves at the base of the thumb); hypertonicity of the arteries (cold, livid hands and feet); the blood-pressure normal or below; the Aschner symptom (change in the pulse on pressure of the eyeball), and a change in the blood picture, increase of the large mononuclears (monocytes, Pappenheim's leukoblasts). This constitutional anomaly seems to be the basis on which various affections develop which have in common an increased irritability of the neuromuscular system. This includes cases of epilepsy, tic, myalgias, vasomotor neuroses, migraine, asthma, "dread neuroses" and especially what has been called vagotony.

183. **Metastatic Cancer of the Skin.**—Laache reports seven cases of metastatic tumors in the skin, sarcoma in three and carcinoma in four cases. In the latter group the primary focus was in the kidney and adrenal, intestine or breast. Death speedily followed the metastasis.

185. **The Kidney Functioning in Nephritis.**—Wolffheim reports extensive functional tests applied in twenty-eight cases of nephritis. In all the actually inflammatory kidney affections the elimination of salt and of water was apparently normal. The elimination of salt was found defective in the oliguric stage of vascular nephritis and in tubular nephritis. The elimination of nitrogen was also intact in the cases of acute nephritis. Retention of salt does not always entail edema, but in all cases with dropsy there is disturbance in the elimination of sodium chlorid, either from retention or from the flushing out of retained deposits of salt. Application of heat to the deeper tissues was applied in three cases with retention of salt, and under the influence of the thermopenetration the elimination of both salt and water improved. These findings encourage further trials in this line. The results of the research on the whole indicate that it is possible by functional examination to differentiate the various forms of nephritis The tests were made with merely keeping the patients on a given milk or milk and rice diet, with or without given amounts of salt and water. The aim was to determine the conditions in regard to elimination of salt and nitrogen on a given uniform diet and when a test amount was given in excess. No attempt was made to apply the potassium iodid and lactose tests for fear of possible injury from the latter and because the inter-

pretation of the potassium-iodid test findings has not yet been perfected.

Zentralblatt für Chirurgie, Leipsic

April 26, XL, No. 17, pp. 633-680

188 Fracture of Sternum. W v Brunn.
189 *Faradic Current in Treatment of Intermittent Limping. (Anwendung des faradischen Stromes beim intermittierenden Hinken.) W. Kühn.
190 Osteoplastic Amputation of the Foot. (Bildung tragfähiger Stümpfe bei der tiefen Amputation des Unterschenkels durch osteoplastische Verwendung der Knöchel.) W. Levy.

189. **Electric Treatment of Intermittent Limping.**—Kühn calls attention to the benefit attained in the case of a man of 68 suffering from intermittent claudication and given treatment with the four-cell electric bath. Each leg was placed in a deep vessel of water at 35 C. and the faradic current was brought into the water. The femoral pulse at first was imperceptible but after twelve sittings it became palpable again. A point near the tibia was still quite painful but this was cured by direct application of the faradic electrode. The patient had long been unable to walk, but now, six years later, he can take comparatively long walks without disturbance.

Zentralblatt für Gynäkologie, Leipsic

April 26, XXXVII, No. 17, pp. 601-640

191 Streptococci in Puerperal Vaginal Secretion. (Bedeutung des Streptokokkenbefundes im Vaginalsekret Kreissender.) E. Sachs.
192 *Cancer in Stump of Uterus. (Ueber die im Uterusstumpfe nach der supravaginalen Amputation sich entwickelnden malignen Geschwülste.) P. N. Hansen.
193 *Biologic Test for Pregnancy. (Ergibt das Dialysierverfahren von Abderhalden eine spezifische Schwangerschaftsreaktion?) Behne.
194 Danger from Moisture Collecting Under Gloves. (Der Handschuhsaft.) H. Hellendall and W. Fromme.

192. **Cancer in the Stump of the Uterus.**—Hansen has become convinced by the four cases he reports that supravaginal amputation of the uterus for myoma should be totally abandoned. One patient was a woman of 43 and an epithelioma developed in the stump six years after the amputation for multiple fibromyomas. There has been no sign of recurrence during the two years since the cancerous stump was removed. In the second case the cancer was a chondro-myxosarcoma with metastases in the lungs and knee. It developed less than a year after the supravaginal amputation for myoma. In the third case there was only a brief interval after the amputation before new symptoms developed and a tumor in the stump proved to be of the same nature—a cystic fibroma—as that removed at the first operation. The bladder was injured—as also at the first operation—and the patient died soon after No trace of anything malignant could be found at necropsy, yet it is possible that some sarcomatous part of the tumor might have been overlooked.

193. **Biologic Test for Pregnancy.**—Behne has examined 100 patients but leaves out of consideration the first forty in which the technic may have been defective. He found the dialysis test almost constantly positive in normal pregnant women but in a few instances it was negative even with certain pregnancy. He also found it positive in a number of non-pregnant women with an inflammatory process in the genital organs or elsewhere. A positive reaction was also obtained in several males but only in those with pulmonary tuberculosis or liver disease.

Zentralblatt für innere Medizin, Leipsic

April 26, XXXIV, No. 17, pp. 417-440

195 Nitrobenzol Poisoning. O. Roth.
196 *Acid-Fast Bacilli in the Blood Stream. (Vorkommen säurefester Stäbchen im Blute.) W. Lang.

196. **Tubercle Bacilli in the Blood-Stream.**—Lang found acid-fast bacilli in the blood of thirteen tuberculous patients and in seven of ten non-tuberculous. Necropsy of three in the latter group failed to disclose any macroscopic tuberculous changes in one; in the second there were a few calcified lymph-nodes at the hilus, and in the third old calcified foci in the apices.

Gazzetta degli Ospedali e delle Cliniche, Milan

April 15, XXXIV, No. 45, pp. 471-478

197 Serodiagnosis of Pneumococcus Infection. (La precipito diagnosi nelle affezioni da pneumococco del Fränckel.) A. Facchin.

April 22, No. 48 pp. 503-510

198 Treatment of Deep Abscess in the Neck. (Studio clinico delle suppurazioni profonde del collo.) F. F. Pisano.

April 24, No. 49, pp 511-518

199 Acute Articular Rheumatism Consecutive to Pseudomembranous Pharyngitis. G. Baglioni.

April 27, No. 50, pp. 519-534

200 *Causes of Pain in Epigastrium. G. Fargnoli.

200. **Causes of Pain in the Epigastrium.**—Fargnoli reviews the various causes which may induce severe pain in the stomach region, calling attention in particular to Pott's disease and Addison's disease as well as tabes, which must be excluded in differentiation. He also reports a case in which there were no symptoms except a progressively increasing pain in the stomach region, by the end of two weeks radiating to the kidneys and shoulder. The patient was a previously healthy young woman and the pain did not seem to be dependent on eating but became more intense about 5 p. m. After a month, fever and symptoms developed explaining the trouble as Malta fever with secondary staphylococcus liver trouble with bile pigments in the urine, the syndrome simulating finally gall-stone trouble. The serum agglutinated the Malta micrococcus at 1 to 1600 and the staphylococcus at 1 to 800. The pains in the epigastrium were so intense that the patient had to be kept under the influence of morphin most of the time but she gradually recovered and is now entirely well, with no signs of recurrence during the nine months since.

Policlinico, Rome

April 20, XX, No. 16, pp. 549-584

201 Wounds from Modern Firearms. (Le ferite prodotte dalle moderne armi da fuoco portatili da guerra nei vari tessuti ed organi.) P. Imbriaco.

April, Surgical Section, No. 4, pp. 145-192

202 Experimental Mechanical Influencing of Hypophysis Functioning. (Sulla compressione artificiale dell'ipofisi.) A. Austoni.
203 Experimental Research on the Internal Secretion of the Testicles. (Ulteriori ricerche sperimentali sulla secrezione interna testicolare.) V Barnabo.

Riforma Medica, Naples

April 12, XXIX, No. 15, pp. 393-420

204 Pancreatic Ferments in Stools as Aid in Diagnosis of Pancreas Disease. P. F. Zuccola.
205 The Meconium from Medicolegal Standpoint. (Del meconio rispetto agli indizii che ne sono desumibili nelle necroscopie.) G. G. Perrando. Commenced in No. 14.

April 19, No. 16, pp. 421-448

206 Tabetic Knee Affection Cured by Resection. (Artropatia tabetica del ginocchio. Resezione. Guariglione.) R. Falcone.
207 Experiences in Tripoli with Scalp and Skin Diseases. (Le tigne, il pian, le piodermatosi ed altre affezioni cutanee curate negli indigeni della Tripolitania.) D. A. Mazzolani. Commenced in No. 15.
208 Torsion of the Funiculum of Retained Testicle. (Intorno ad un caso di torsione del funicolo in ectopia inguinale del testicolo.) P. Tasca. Commenced in No. 15.

Brazil-Medico, Rio de Janeiro

April 1, XXVII, No. 13, pp. 121-130

209 Urinary Fever. F. Luz.

April 8, No. 14, pp. 131-140

210 Treatment of Aneurysms. C. Werneck.

April 15, No. 15, pp. 141-150

211 Musical Heart Sound. (Sopros musicaes do coração.) C. Fraga.

Semana Medica, Buenos Aires

March 27, XX, No. 13, pp. 741-796

212 Technic for Operating on Enlarged Inferior Turbinate. (Una nueva intervencion en algunas hipertrofias del cornete inferior.) M. J. Rizzi.
213 Congenital Myatonia. (La patogenia y anatomia patologica de la miatonia congenita de Oppenheim.) G. A. Alfaro.
214 Ultraviolet Rays in Sterilization of Water. V. Delfino.
215 Suction Hyperemia in Otology. (Resultados personales de la aspiracion de Bier en Otologia.) D. E. Botella.

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MENINGITIS OF THE EPIDEMIC TYPE IN CHILDREN BELOW TWO YEARS OF AGE*

HENRY KOPLIK, M.D.
NEW YORK

The diagnosis and treatment of cerebrospinal meningitis in children below 2 years of age has become a very important problem. Without fear of overestimating our modern advances in methods of diagnosis and treatment, it may be said that in older children, between the ages of 2 and 10 years, this dread affection has been deprived of its many terrifying aspects. The disease in these older children is easily diagnosed and the treatment now in vogue with the Flexner serum has given the disease a prognosis in epidemic periods equal to that of a lobar pneumonia, and in sporadic cases even a better prognosis than the pulmonary affections. In sets of sporadic cases the outlook is not worse than in any of the ordinary affections of an infectious nature in childhood. The children and infants below 2 years of age often present symptoms which are misleading and, therefore an early diagnosis is not made in a number of cases. This would seem strange to some who, from the text-book description, expect a meningitis in a young child or infant to present certain definite symptoms. The diagnosis is often masked, the physician not even entertaining a thought of meningitis. It is the fear of making a lumbar puncture and finding a clear fluid normal in every way, with the consequent doubting attitude of those about the patient, that must deter many from performing this necessary aid to an early diagnosis. In no other way can we account for the large number of infants who are sent to the hospital quite late in the disease without any diagnosis having been made. Even in the hospital, with the young patient under our direct observation, it is often difficult to come to a conclusion before lumbar puncture. Particularly difficult are the cases in infants which are complicated with a pneumonia. Many cases of pneumonia are complicated with cerebral symptoms; there is the restlessness, the rigidity, the retraction of the head and the fever which continues a long time past the initial phase of the disease. Again, there are in young infants a number of cases in which the initial symptoms of fever and restlessness are not combined with any other symptoms, such as rigidity; or there may be a slight concomitant otitis to mislead us at first into the feeling that we are dealing with a purulent ear disease instead of a meningitis. The remittence or intermittence of a high temperature with increasing restlessness, and finally the appearance of neck-rigidity then shows us we have had a meningitis from the outset. In fact, many diseases of infancy, even a simple intestinal disorder, are so often combined with milder forms of cerebral symptoms that we can easily explain how a meningitis in younger children and infants is often overlooked. The physician is alive to the presence of a Kernig, but this is certainly absent in many infants and is of little value in the diagnosis of a meningitis. Again, the onset in many diseases is with convulsions or repeated convulsions, and it would be rash to conclude that in every such case a meningitis might be present. An observation period is therefore assumed to be necessary and then valuable time is unavoidably lost.

Therefore, the first impression we obtain in a study of a series of cases of meningitis in the very young is that in all cases we should never lose sight of the possibility of meningitis and that perfection and accuracy in diagnosis in these subjects are essential.

I say, without fear of dispute, that a day's delay in older children is not dangerous (as will be seen from a study of the subject), but the same delay in a baby may mean its loss. The stress of diagnosis must be placed on the persistence of cerebral symptoms, high fever and, what is of greatest import and scarcely appreciated at its full value, Macewen's percussion note over the frontoparietal juncture as a sign of increasing fluid in the head. The younger the child the more difficult it will be to come to a definite conclusion as to increase of fluid in the ventricles, for in rachitic infants a Macewen percussion note is normal, but some practice will teach the difference in the line between the normal and abnormal. A tense fontanelle is of some value, but not always, for some children will mislead the most expert when a crying spell is present.

The mortality in young infants in cerebrospinal meningitis is quite high. In the statistics prepared by Flexner of his serum cases, of 125 infants below one year of age, treated by serum, 63 recovered and 62 died; a gross mortality of 50 per cent. On the other hand, 5 infants injected in the first three days of the disease recovered, and of 16 patients injected in the first week 12 recovered (75 per cent.). In other words, the earlier the injections the more certain the therapeutic effects of the serum. In another statistical report, giving an analysis of 400 cases, there is a mortality of 50 per cent. in 22 patients of 1 year and below, and 42 per cent. between 1 and 2 years of age. Taking these figures as a basis of comparison, in our own service in the Mount Sinai Hospital, there are 15 patients below one year of age with a mortality of 10, or 66 per cent. Of these 15 patients, 2 injected on the fifteenth day recovered, one injected on the seventeenth day improved (discharged), one on the twenty-first day was cured, and one on the twenty-ninth day cured.

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* Read before the Clinical Conference in February, 1913, Mount Sinai Hospital.

In young patients the temperature is a guide of great value as to the necessity of repeated puncture and introduction of serum as in older children, but in face of great restlessness and a normal temperature fluid should be withdrawn by lumbar puncture and examined for bacteria. If these persist and a cloudy fluid is obtained, it is safe to reintroduce serum rather than delay and wait for actual cultures to determine whether or not such fluid is sterile. This brings me to a discussion of a baffling feature of this disease in infants and children below 2 years of age. I have mentioned the closure of the foramen of Magendie and the impossibility of performing lumbar puncture in many cases. We then see developed the hopeless picture of posterior basic meningitis. But more baffling are the cases of infants in whom, after repeated injections of serum have been made and the temperature having dropped to the normal and stayed there for weeks, we have developed under our eye the various features of a progressive hydrocephalus. This occurs even when the fluid withdrawn is shown after a time to be sterile. This hydrocephalus is not only due to changes in the ependyma of the ventricles, but, as I have shown and also know, to a persistence of the meningococci in the ventricles in much diminished numbers and of reduced virulence.

I have tried in this summary of our practice in the wards to point out the great difficulties as we meet them in the diagnosis and treatment of these cases and to emphasize the necessity for caution before pronouncing such patients cured. Until some time has elapsed since the onset of normal temperatures, the possibility remains that hydrocephalus may intervene, and I would emphasize the fact that much still remains to be done before we can rest satisfied with our means of aiding these patients.

30 East Sixty-Second Street.

PREVENTION OF DISEASE VS. COST OF LIVING *

THOMAS F. HARRINGTON, M.D.
BOSTON

It is now pretty generally accepted that the increase in the cost of living must be reckoned with as a necessary consequence of the social, economic, and political development of the world. The problem is made up of so many complex items that little hope need be expected that a reduction in the cost of the several factors is likely or possible. Neither is there much promise of success in a fight to reduce the total cost of these various component elements. The situation is quite analogous to that which has developed in preventive medicine. Here we have found that germs of disease and microbes are so numerous and are so ubiquitous that their complete eradication is impossible. Some of them are helpful to health; others are powerful allies in combating certain diseases if rightly marshaled. The successful campaign against the harmful germs has been so to raise the inherent fighting power of each human being that the attacks from germs cannot get by the person's defense, that is, by his asset of health, or health income. Each person has within himself this resistant power to disease. Modern medicine consists greatly in bringing it into action. In the fight against tuberculosis alone, it has resulted in a reduction of deaths, in Massachusetts, of 45 per cent. since 1880. If the same principle is applied widely and in accordance with established facts in medicine, so that individuals are enabled to develop a greater working power, both in quality and in quantity, the increase of each one's wage income would exceed, or at least keep pace with rising prices. This would defeat the most powerful factor making for discontent, discouragement, and failure in the battle for life to-day. It would substitute for inefficient and unsatisfactory existence a happy, healthy, better living with which to meet the problems of high cost of living and present-day discontent.

There are two facts, however, which must be stated plainly to avoid misunderstanding. The first is the absence of a fixed normal standard of living for all classes of society; the second is that one hygienic advantage may be bought by a hygienic sacrifice in another direction. As an example of the latter, we find that people living under conditions which suggest unhygienic modes of life are often remarkably free from disease, and their children survive attacks of those infant diseases so fatal to a large number of babies each year. These people spend much time out of doors in the sunshine and fresh air. They are less dependent than others on housing conditions; consequently they can spend a greater proportion of the annual income on food, etc. This fact is often overlooked in dealing statistically with the cost of living, especially with the problem of housing conditions.

Stated briefly, a normal standard of living may be defined as that which permits each individual to live as an efficient, healthy human being—morally, mentally and physically. This definition simplifies greatly the whole problem of the cost of living and reduces it to a consideration principally of two factors—health and efficiency. All economists to-day agree that the greatest asset of any country is the vital efficiency of its citizens. Moralists and physicians agree that this factor has a direct relationship to morals and to mental efficiency. Furthermore, both assert that the conservation of the physical efficiency aids greatly in conserving the moral and the mental standard of society.

It is my purpose to point out some of the methods which modern medicine offers as a means to promote health and, so far as efficiency is dependent on health, to promote efficiency.

It is unnecessary to relate here the marvelous development of knowledge in all branches of science during the past century. The century has been justly termed the renaissance of science. In this medicine has profited greatly. The empiricism of former years has given place to facts based on careful clinical observations and on well-tested laboratory findings. This expansion and deepening of science has fortunately developed in medicine a higher reverence for and open acknowledgment of the spiritual and the humane. This has given to modern medicine a genuine altruism. The application of these various facts constitutes preventive medicine.

The more clearly one sees the whole field of preventive medicine, the stronger the conviction that all the problems are social problems and that they must be solved by social remedies. This is at once evident when we recognize, first, that the responsibility for the conditions that cause these diseases lies with the people and, secondly, that all the power and authority for bettering conditions also rest with society and its agents. It is a popular belief that the control and the prevention of disease are

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* Address given under the auspices of Council on Health and Public Instruction of the American Medical Association before the Women's Municipal League, Boston.

largely a duty of the medical profession. This is not true. The medical profession can and does furnish the technical information as to how disease can be abolished or at least reduced. The physicians can point out the way, but they cannot, of themselves, accomplish anything permanent without public support. This support, this cooperation can come best when the public understands what is needed and why it is necessary. Public education, therefore, becomes an indispensable and a necessary factor in every movement for conserving health.

It adds to rather than detracts from the gifts of Jenner, Pasteur, Koch, Behring and others to assert that their discoveries in medical science were comparatively of small value to humanity until the public was educated in the value and the significance of these wonderful achievements. To-day the results are manifest in the reduction of some diseases almost to nothing, as yellow fever and small-pox; in robbing epidemics, as diphtheria, plague and cholera, of their terrors; in lessening the sufferings and the economic loss in quarantine; and, finally, in developing a happier, healthier, longer-lived community the world over. Each day the force and the wisdom of Pasteur's declaration that no human being need die of a parasitic disease is more appreciated, especially as the public comes to realize the enormous unnecessary waste of health, efficiency, and life itself yet prevailing and due greatly to causes which are preventable.

Some one has lately very appropriately placed preventable ignorance in the same list with the three other great preventable and unnecessary wastes, namely, preventable deaths, preventable sickness and preventable conditions of low physical and mental efficiency.

In reporting on the cost of living, the Massachusetts commission had this to say on this point:

> The increased vital efficiency of the citizens of this state which would result from a conservation of the present waste of health would, if expended in labor, increase the earnings of those whose health is impaired and also lessen the burdens of those who are at present unnecessarily ill. This increase in earnings would thus tend to reduce the cost of living, increase the total earnings of the citizens, and make the average income larger.

The commission asserts positively that there is no direct relation between the waste of health and the recent rise in prices; and furthermore, that there is no evidence that the waste of health lowered the rate of wages. It is very evident, however, that sickness, if long continued or often repeated, lowers the efficiency of the individual, and this lowered efficiency means, sooner or later, a reduced income, often a new and less permanent job. Conservation of health, therefore, means higher wages and this enables the workers to keep ahead of the increasing price of the commodities of life.

The extent to which health may be conserved and the number of accidents and deaths that can be prevented to-day seems incredible. The testimony of all those who are competent to judge agrees that on a very conservative estimate, 42.3 per cent. of the deaths each year might be postponed; that at least 50 per cent. of the cases of serious illness are preventable; that the average human life is capable of being prolonged 12.3 years; that 4 per cent. of the population of Massachusetts are on the sick list all the time with an average loss, to each individual in the state, of the equivalent of two weeks' wages each year. Stated in dollars and cents, this means that families and the state suffer an annual loss of fifty million dollars because of preventable deaths and preventable serious illness—a per capita loss; each year, of fifteen dollars. This startling unnecessary waste does not include the economic loss of the 12.3 years that are sacrificed to indifference, ignorance, and neglect in applying the lessons which preventive medicine makes possible.

These great unnecessary wastes of human life and efficiency, affecting the cost of living and which are greatly preventable, may be grouped as follows: (1) preventable accidents; (2) preventable illnesses, and (3) preventable deaths.

Under the head of preventable accidents we are rapidly accumulating a mass of testimony the application of which to preventive measures should reduce greatly the risk and hazard of industrial life. Occupations are now being classified on a basis of relative risk to the workers. While it is true that many occupations will always carry with them unavoidable risks, nevertheless it can be claimed, without fear of successful contradiction, that there is not one of these occupations in which the hazard and risk of accident cannot be reduced to a minimum. The reports of the committee of the National Association of Manufacturers and the Interstate Commerce Commission show that in this country there were 500,000 workers incapacitated or killed by accidents incidental to industrial life in one year. The fact that 11,800 persons, employees and others, were killed, and 111,000 maimed on our railroads is in striking contrast with the reports from the industries of Germany, where the established facts of preventive medicine are applied. Since July 1, 1912, there has been in operation in this state a Workmen's Compensation Act. In six months over 52,000 accidents have been reported. The provisions of this act and the exceptionally high personnel of the commission justify a most optimistic view with regard to future prevention of the great loss of health, limb and life. It has been the experience in Germany—and in states in this country—that the adoption of this line of insurance has led to the installation of safety devices by employers which have reduced greatly the number of accidents. In the meantime, much progress can be made by instruction in the prevention and the avoidance of dangers incidental to industrial life. This is very necessary to-day insomuch as the trend of public education is toward greater emphasis on vocational training. Children now being guided into the various lines of vocational life should be given a word of warning or caution on its possible dangers. Laws may compel the employers to protect the employee from exposed machinery, from dangerous fumes or irritating dusts but no law can compel operators in rubber factories, for instance, to wash their hands, or prevent operatives at this work from eating and drinking in the work-room. Neither can laws adequately protect the employee from accident from electricity when this element is a necessary and often unavoidable source of danger. Instruction in prevention is here more important than labor laws for either protection or compensation.

Undoubtedly the three great factors besides ignorance which promote industrial accidents are defective hearing, defective sight and fatigue. Many failures, both in health and in efficiency, are due to poor sight or hearing. Persons with either defect are as clearly out of place at many lines of industrial life as a color-blind person would be as engineer, pilot or color-mixer. Many occupations increase these defects. Accidents must result sooner or later.

One of the immediate results of the application and future extension of the Employers' Insurance and Workmen's Compensation Act must necessarily be that great attention will be directed to those physical defects which tend to increase industrial accidents, especially defects of vision and hearing, a large majority of which defects are remedial and curable.

The influence of the factor of fatigue in causing industrial accidents has not received the attention it deserves. The amount of unnecessary fatigue among all classes is not appreciated. Professor Fisher states that 5 per cent. of all persons in this country are fatigued to a degree sufficient to totally impair their working powers. Every physician—conversant with industrial life in our great manufacturing centers—recognizes the constantly recurring accidents which occur daily in the mills and workshops. These accidents occur with a clock-like regularity at certain hours of the day, a time of the day when the fatigue factor is most active. This fact has been carefully worked out in the German insurance tables and is as follows:

Time.	Accident Per Cent.	Time.	Accident Per Cent.
6- 7 a. m.	2.82	12- 1 p. m.	3.81
7- 8 a. m.	5.16	1- 2 p. m.	4.84
8- 9 a. m.	5.29	2- 3 p. m.	6.73
9-10 a. m.	6.04	3- 4 p. m.	8.07
10-11 a. m.	10.37	4- 5 p. m.	7.65
11-12 a. m.	10.31	5- 6 p. m.	8.48

From a very intimate knowledge of industrial life in the largest manufacturing city of this state, I have no hesitation in designating fatigue as one of the great factors in accidents of factory life. Fatigue has also a direct bearing on the susceptibility of the individual to disease. It lowers the whole tone of the nervous and muscular systems. It is a great evil not yet sufficiently recognized as a factor in undermining health and efficiency. It can be prevented almost wholly. Fresh air, good ventilation, avoidance of overheated workshops, enforced periods of rest interspersed in daily life, especially at midday, outdoor exercise at noon rather than confinement in vitiated room atmosphere, a more rigid inspection of industrial and mercantile conditions of employment, a strict enforcement of laws relative to hours of labor, especially those relating to women and children, and a proper regard for sanitary and toilet accommodations will reduce almost to zero the evil possibilities arising from fatigue. The simple exercises of physical training—now taught in the schools—should be given such a definite meaning to the pupils that each child carries into industrial life an appreciation of the value of these simple means to promote better circulation and respiration.

PREVENTABLE ILLNESS: (A) OCCUPATIONAL DISEASES

Besides the accidents incidental to many occupations, certain diseases have become so closely associated with certain lines of industries that they are known as occupational diseases. Some of these industries have been designated as "dangerous trades," and the State Board of Health in this state is enjoined by the legislature to safeguard in a special manner the health of employees at these trades. Minors under 18 years of age are prohibited from entering certain specified trades of this group. Already the board of health has designated some twenty-six of these as dangerous trades, into which minors must not be permitted to enter. The list includes many trades which the educational authorities in several states are incorporating to-day into their programs for vocational training, as well as for industrial and trade-school work. Educational authorities have a great responsibility added to their strictly pedagogic functions by reason of this fact. A knowledge of these dangers should form a part of the preparation of those who are to undertake the teaching of trades in the public schools. Preventive medicine has pointed out ways and means which, if employed, will reduce to a minimum many of the dangers arising from these trades. It has designated certain family and individual traits which predispose to the development of definite diseases if the person is subjected to employment at specified trades or vocations. The disregard of this "tendency to diseases" explains the occurrence of many physical breakdowns in industrial life.

There are other trades in the pursuit of which physical incapacity is almost unavoidable. Examples of this group include woodcarving, lithography, typesetting, as well as the work of copperplate engravers, designers, photographic retouchers, goldsmiths, diamond-cutters, jewelers and needlewomen, especially those who work at embroidery. Obviously none with defective eyesight should enter these trades. In certain other trades, such as electric iron-welding, glass-blowing, etc., the dazzling rays of excessive light promote the formation of cataract. In trades in which lead, arsenic, phosphorus, methyl alcohol, nicotin, nitrobenzol, etc., are used, the occurrence of skin affections, eye affections, neuritis, paralysis, bone diseases, kidney diseases and blood diseases is so constant that no one to-day questions the cause. Preventive medicine has been able to reduce these dangers greatly, principally by adequate ventilation and light, and by instruction. It would take us too far to enter into the various manifestations of occupational diseases. Sufficient has been given, however, to warrant the suggestion that preventive medicine must form a part, and not an inconsiderable part, in any plan of industrial education or vocational training if the workers are to acquire and retain their best efficiency and health.

PREVENTABLE ILLNESS: (B) GENERAL DISEASES

It has already been pointed out that fully 50 per cent. of illness is preventable. It is no exaggeration to state that if all easily preventable physical troubles were prevented, the addition which would be made thereby to the energy and happiness of the people is beyond description. This item is an additional gain in the family budget—the usual index of the cost of living. Not only has preventive medicine pointed out what diseases are preventable and how to prevent them, but also it has clearly grouped disease, both as to individual and to class, so that predisposition and immunity each have a vital value. The money value of preventable illness in Massachusetts is, including loss of wages and cost of medical attendance, $14,896,912 each year. This great loss occurs in the wage-earning period of life. It is the one factor often in the cost of living which, if transferred to the asset or credit column of the family, would mean an individual or family added to the class of producers with efficiency and one less in the group of dependents with inefficiency. The results achieved in the fight against tuberculosis are not unique in preventive medicine. Reduction in the morbidity, as well as in the mortality, of other diseases is equally striking and encouraging. The value of the lessons of the antituberculosis crusade lies greatly in the fact that the public is now convinced that the once dreaded foes to humanity no longer possess the terror of former times; furthermore, that it is possible to win a victory over inheritance, environment, disease and even death by the observance of the simplest teachings of preventive medicine, especially those on cleanliness, exercise and diet; also that the effective remedies often are solely Nature's gifts—fresh air, sunshine and rest. It is becoming more evident each day that the weapons so effective against tuberculosis are equally effective in combating many other infectious diseases, as well as in eradicating those nervous and functional disturbances which are productive of ill health. While it is unquestionably true that enhanced prices of food have affected injuriously the health of many in the community, nevertheless it is far more evident that the real cause is often an unwise expenditure of the income for articles of food and, more evident still, an improper preparation of food rather than a question of quantity or quality of food or size of income even.

Educational authorities have grasped this fact and to-day great emphasis is being laid on this form of instruction to those who in a few years will be the housewives of the community. This brings the problem of prevention of disease and the cost of living back to the schoolroom. Here lies the greatest opportunity for teaching the value of health and efficiency rather than trying later in life to reduce the cost of neglect of this instruction. The two terms "value" and "cost" are not synonyms.

A good illustration of this fact is the prevalence of heart-disease. It outranks tuberculosis, pneumonia and infant mortality as a cause of death in Massachusetts. It has no equal as a cause of impaired efficiency. It is alarmingly common among schoolchildren. All physicians agree that there is a great difference between a cardiac lesion and a diseased heart. No matter what the anatomic change present may be, that heart is not a diseased heart so long as it can adequately take care of the demands placed on it by the individual. Although this is all true, nevertheless the great value of treatment in heart-affections is that of prophylaxis or prevention, rather than therapeutic or cure. This latter is the cost of negligence in applying prevention. So long as the cardiac lesion can be prevented from becoming an inadequate or incompetent heart, all goes well no matter how serious or of what form the changes in the valves or heart-muscles may be. The enormously high death-rate from heart-disease to-day and the great frequency with which children at the school age exhibit genuine heart-diseases, often beyond a possible stage of competency adequate for the simplest vocations of life, make this problem one of the most important in political economy.

Eliminating the heart diseases of those congenitally defective, who seldom reach the wage-earning period, it can be claimed that fully 80 per cent. of heart-disease could be prevented if the initial lesion and the exciting cause of the lesion were treated with half the care that is now given to the same stage of incipient *tuberculosis.* Preventive medicine teaches that rheumatism (often called growing pains), tonsillitis, chorea (St. Vitus' dance), diphtheria, scarlet fever as well as the various infectious diseases, cause a large percentage of heart-disease each. Some of these heart-affections are unavoidable. Many, however, are preventable if anticipated early.

Special hospitals for the training of children and adults afflicted with heart-disease offer the greatest promise of so molding lives that each person by a wise choice of occupation and mode of life may be able to live efficiently within his cardiac power. The cost of failure to learn the value of this lesson is inevitable—irregular employment, repeated illness, changing occupations, broken compensation of the heart and, finally, complete permanent dependency.

Next in importance to heart-disease prevention is the problem of prevention of diseases of infancy and of childhood. The necessity, as well as the importance, of beginning this prevention early in life is shown by the single fact that one-third of all cases of blindness can be referred to infection and neglect at the time of birth. These sightless babies soon become a burden on the family and subtract much from the possible income by the home care required from wage-earning mothers. Much infection of eyes, nose, mouth, etc., of the newborn can be avoided by the observance of the simple rule in preventive medicine—cleanliness.

Infant morbidity and infant mortality as recorded to-day are a gross injustice to God and to mankind; neither excusable nor pardonable. It is little short of criminal negligence that permits them to exist. That they represent the greatest loss to mankind to-day is the verdict of all economists. To state that one-fifth of all deaths that occur each year are those of infants less than one year of age, and that one-fourth of all deaths are those of children less than five years of age, while appalling, does not half state the situation. Our present knowledge of sanitary measures guarantees readily that 47 per cent. of those who die during the first year of life could be saved, and that 67 per cent. of the diseases that kill in the first five years of life are preventable. Notwithstanding this possible prevention, more than 200,000 of these young lives are sacrificed each year in this country at the rate of one life each ten seconds of time. Nothing so contradicts our boasted civilization and our claim of modern advance in medical science as this yearly unnecessary waste of infant life. At times it would seem, from the apparent indifference shown in the matter, as if the public yet believed that this high rate of mortality among children at or soon after birth was a wise dispensation of Nature to eliminate the unfit. In a study of this problem, it becomes evident that almost one-third of these deaths, especially of children under one year of age, can be ascribed to diseases of the digestive system. These diseases, together with those of the respiratory system and congenital debility, carry off 70 per cent. of all babies who die in the first year of life. This reduces the problem of prevention to simply giving to the baby its natural birthright, namely, the right to be born healthy, and secondly, pure milk and pure air or, as it is more generally stated, proper feeding.

The noble, patriotic, unselfish warfare that this association has waged for a purer and better milk-supply in our city has won the admiration of all who put a value on human life above that of commercial interests. No physician questions the benefit of this factor in reducing infant illnesses and deaths in many cases in which this form of artificial feeding has, through necessity, been adopted. The problem that I would present, however, is not so much that of the quality of cow's milk as an article of food, but whether it should be advocated as an adequate or preferred substitute for natural breast-feeding. I do not think it is. Undoubtedly, the high cost of living has forced many women to seek employment outside the home in order to help out the family income, and a large sacrifice of life, prenatal as well as infant, has resulted. Many infants, even when born healthy, are sacrificed by either the inability or the unwillingness of mothers to nurse their offspring. The question of infant morbidity and infant mortality is not one of sanitation alone, or of housing, or of poverty such, but is mainly a question of motherhood. The problem will be solved only when the value of intelligent motherhood is placed above that of philanthropy, of hospitals, of the medical profession and of the state. Neglect and ignorance are, therefore, more important than poverty as causative factors in the cause of infant illness and deaths. We have two striking illustrations bearing directly on this point.

During the siege of Paris (1870-71) the women were compelled to nurse their own babies on account of the absence of cow's milk. Infant mortality under one year fell from 33 to 7 per cent.

During the cotton famine of 1860 women were not at work in the mills. They nursed their babies and one-half of the infant mortality disappeared.

From 80 to 90 per cent. of all deaths from gastro-intestinal disease among infants takes place in the artificially fed, or ten bottle-fed babies die to one which is breast-fed. In institutions it has been found that the death rate is frequently from 90 to 100 per cent. when babies are separated from their mothers. After a trial of fifteen years, by which over 7,000 mothers with their babies were placed out in domestic service, the New York society was able to report that four-fifths of the babies lived and were in good condition; one-fifth died or were in poor condition.

The subject of infant-feeding, therefore, is not to be treated as an ethical question alone, but must be considered as a problem of preventive medicine of far-reaching results. It is an undisputed fact of preventive medicine that certain vital tendencies, which make for the preservation of the infant, such as immunity against certain infectious diseases, are transmitted through the mother's milk to her child. Neither a wet-nurse's breast-milk nor a cow's milk can do this for a child.

The dangers connected with cow's milk as an infant food are principally these—the chemical, the bacteriologic and the quantitative. Even with these three elements reduced to their lowest danger-point, there yet remains such a difference between cow's milk and human milk that the former can never be considered a safe substitute for the latter. This does not mean that we should relax one bit our efforts for pure cow's milk, which is in itself as near a perfect food chemically as any article of food we possess. Its value as an article of food must not be confounded with its relative value as a food for infants in place of maternal nursing, or even of wet-nursing of infants. One has to recall but a few of the essential differences between human milk and cow's milk to see the force of these statements. Notwithstanding all the successes in lessening the dangers from cow's milk, and with a full knowledge of the results achieved in feeding by modified milk preparations, I have no hesitation in advocating breast-feeding even under surroundings which appear to be unfavorable. The great prevalence of digestive disturbances, leading invariably to impaired vitality, often of a permanent degree, and the high rate of mortality among artificially fed babies, in spite of the great progress made in the art of artificial infant-feeding during the last decade, rob the foregoing statement of all appearances of an exaggeration of the problem.

There are unfortunately a large class of women who cannot nurse their infants, but medical experience the world over fails to substantiate the popular belief that failure to nurse the children is due to weakness in the mothers. The decrease in the proportion of breast-fed children is due, first, to more frequent occupation to-day of wife and mother outside the home; second, to the exaggerated claims of artificial food manufacturers, and the popular delusion that their adaptation to the physiologic needs of each infant is so simple that the process can be safely entrusted to "little mothers" who, after one or two lessons, can accomplish what the highest trained clinicians, working under ideal conditions of cleanliness and sanitation, fail to attain. Modern dress and modern social life have combined as factors in reducing the proportion of breast-fed infants. Whether these factors will collect their toll on the next generation of daughters remains to be seen. A recent investigation showed that only two daughters, out of 480 born to mothers who could not nurse their children, were themselves able to nurse.

The much-heralded influence of poverty, overcrowding and poor housing conditions as factors in infant mortality does not accord with facts. Whatever influence any one of these conditions might possess is greatly minimized by the favorable effects of breast-feeding and, as pointed out in the beginning, by the purchase, so to speak, of our hygienic advantage by a hygienic sacrifice in another direction. The truth of this is evident from a study of our own local situation. Boston has the lowest death-rate of infants under one year of age of any city in the country. Ward 8 has 190 persons to the acre, the most thickly settled part of Boston; yet it is next to the best ward, so far as infant mortality goes, and only fourth in the total mortality of the city. Ward 10, the sixth most congested district in the city, has the lowest general mortality as well as the lowest infant mortality in the city. The highest total mortality occurs in Ward 7, which has only 38 persons to the acre. Ward 5, with a density of 62, and Ward 13, with a density of 35, stand quite high in the rate of mortality each year. These same general results can be quoted from many cities of foreign countries. The conclusions from the study of the problem in the most insanitary districts of Italy are that the low infant mortality prevailing in many of these districts is due to the custom of breast-feeding followed by the poor people. In many cities of Germany and Austria the law requires the death certificates of infants shall contain a statement of the kind of food given to the infant either shortly before its death or throughout its life. There is no legitimate reason why the use of artificial foods and of so-called milk substitutes for infant-feeding should not be controlled by law and their use limited to the prescription of a physician. Such a law would reduce greatly infant morbidity and infant mortality.

I have dwelt at some length on the problem of infant morbidity and mortality because it is one of the greatest preventable wastes of life to-day, and one that weighs most heavily on the family budget. It resolves itself chiefly into a question of proper feeding. This is best guaranteed by intelligent motherhood, which can alone give to the infant that which neither wealth nor state nor yet science can offer with equal benefit to mother and child.

Many lessons of the value of preventive medicine in solving the complex problems of the cost of living might be presented in addition to those given in this address. I have selected the more prominent and the more evident of the group. There are others equally important.

The fact to remember is that the whole problem is a social one. Increased cost of living is not likely to be lessened or altered by laws or mode of life. Such remedies are largely academic. Preventive medicine does offer a cure for the condition in part at least if not in its entirety. It shows how the enormous waste of health, energy, money and life may be curtailed and greatly prevented. It guarantees to each person who will learn its lessons and who will apply even its simplest teachings an assurance of greater power, greater health, greater wage-earning ability. This means a nearer approach to the normal living standard of each individual—an efficient, healthy mode of life—physically, mentally and morally.

310 Commonwealth Avenue.

WOOD-ALCOHOL BLINDNESS

REPORT OF TWO CASES, ONE OF EXTERNAL AND ONE OF INTERNAL USE *

HIRAM WOODS, M.D.
BALTIMORE

My object in reporting these cases of wood-alcohol blindness is to arouse, if possible, enough sentiment in the medical profession to influence the legislature to pass an act safeguarding innocent persons against an insidious poison. In 1897 Dr. Archibald G. Thompson[1] of Philadelphia reported a case of sudden blindness due to drinking "Jamaica ginger." A year later four such cases came under my observation, while two others were furnished me by my friends Drs. Herbert Harlan and Francis M. Chisolm. I reported these six cases[2] in 1899. All the patients presented substantially the same symptoms. They had drunk what they supposed to be Jamaica ginger. Shortly afterward, within from twelve to twenty-four hours, they were seized with nausea, headache, prostration and coma. These were attributed to a "drunk." On awaking they found themselves blind, or with central vision lost: all of them went through various periods of transient and temporary improvement, finally settling down into either total blindness or loss of central vision.

Both Thompson and I were totally at a loss to account for the toxic agent. The eye lesion in all cases was nerve atrophy. In searching literature I found a case reported by Mengin[3] presenting similar symptoms, attributed to wood alcohol. The date of this case was 1879. It was mentioned in my paper.[2] I obtained from one or more of the victims the name of the maker of the Jamaica ginger and asked for the formula; alcohol was one of the ingredients, but the kind of alcohol was not specified. I asked whether it was wood or grain alcohol, and the reply was "grain." This statement was accepted as true. Subsequently specimens of Jamaica ginger made by this firm were obtained and submitted to chemical analysis. Wood alcohol was found, and its use confessed later under oath when the cases became the basis of suits. These were finally compromised on payment of damages.

For some years thereafter blindness from wood alcohol was reported from various parts of the country and from different preparations, soft drinks, etc. In 1904 the late Dr. Frank Buller of Montreal and Dr. Casey A. Wood[4] of Chicago collected reports of all the cases to date. While many instances doubtless escaped them, they found 275 instances of death or blindness traceable to wood alcohol. Since then the literature has been comparatively free from such reports. Lately, however, they have reappeared. An admirable and instructive article on the subject was published recently by Dr. Wood.[5]

A word now with reference to wood alcohol itself. It is very much cheaper than grain alcohol. Dr. Wood gives the average comparative price as 50 cents per gallon for the one and $2.40 for the other. Until chemical methods succeeded in refining wood alcohol so as to remove its unpleasant odor and taste, it could not be used internally. Unfortunately, some skilful chemist discovered that the obnoxious factors could be removed. At present, under the name of Columbian Spirits, Standard Wood Spirits, etc., a deodorized and apparently not bad-tasting preparation of wood alcohol is on the market. The Standard Wood Spirits preparation is labeled "For Bathing, Burning and Cleaning." Its chief sale is in Canada, according to Dr. Wood's paper. Columbian Spirits is, I believe, made extensively in the United States. The difference in price is a big inducement to manufacturers to employ wood alcohol.

An interesting and singular feature is the great difference in the susceptibility of individuals to the influence of wood alcohol. As small a quantity as a teaspoonful has been known to produce serious consequences, while other persons have consumed large quantities with impunity. One of the interesting sideshows in the Baltimore suits was the spectacle of one of the defendants sitting on the witness stand and demonstrating the innocence of Columbian Spirits by taking copious drinks from time to time. As Dr. Wood states, the exact way in which wood alcohol destroys or cripples the central nervous system is not well understood. It is known, however, that it is not easily eliminated, as is the case with ethyl alcohol. It is believed that formaldehyd is one of its by-products. It has a peculiar cumulative effect, small and repeated doses, while not causing intoxication, often leading to serious results on the nervous system. As stated, the cause of blindness is atrophy of the optic nerve, with probable destruction of the ganglion retinal cells. In Dr. Wood's recent paper he quotes from the report by Dr. Buller and himself some fourteen conclusions. The following are some of them:

1. Methyl, or wood alcohol, in any of its forms, and all methylated preparations as well, are dangerous poisons, menacing both life and sight.

2. It is used as an adulterant of, and substitute for, grain alcohol in cheap whisky and other alcoholic beverages, not to mention Jamaica ginger, lemon extract and many other essences and flavoring fluids.

3. Methyl alcohol is largely used in the preparation of many proprietary and patent medicines, witch hazel, domestic liniments, as well as bay rum, cologne water, Florida water and other perfumes.

5. The symptoms of acute poisoning are gastro-intestinal disturbances, more or less severe, accompanied by abdominal pain, general weakness, nausea, vomiting, vertigo, headache, dilated pupils and blindness. If recovery does not occur, there is marked depression of the heart's action, sighing respiration, cold sweats, delirium, unconsciousness, coma and death.

7. The diagnosis can hardly be mistaken. Methyl alcohol poisoning presents a picture unlike that of any other intoxication. Acute abdominal distress, followed by blindness, should always awake suspicion of methyl alcohol poisoning.

8. The prevention of poisoning by this insidious drug can only be brought about by prohibiting (or rendering unprofitable) the sale of deodorized wood alcohol in all its forms. The

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* Read at the annual meeting of The Medical and Chirurgical Faculty of Maryland, April 23, 1913.

[1] Thompson, Archibald G.: Ophth. Rec., November, 1897.

[2] Woods, Hiram: Ophth. Rec., February, 1899.

[3] Mengin, cited by Knies: The Eye in General Diseases, p. 347.

[4] Wood, Casey A., and Buller, Frank: Poisoning by Wood Alcohol. Cases of Death and Blindness from Columbian Spirits and Other Methylated Preparations, The Journal A. M. A., Oct. 1, 8, 15, 22 and 29, 1904, pp. 972, 1058, 1117, 1213 and 1289.

[5] Wood, Casey A.: Death and Blindness from Methyl or Wood Alcohol Poisoning, with Means of Prevention, The Journal A. M. A., Nov. 30, 1912, p. 1962. See also Methyl Alcohol as a Poison, editorial, The Journal A. M. A., Nov. 30, 1912, p. 1974.

number of deaths may, meantime, be limited by putting all methylated preparations on the list of poisons and prosecuting all persons adulterating foods and drinks with it. Labeling it with the notice, "This fluid, taken internally, is likely to produce blindness," will certainly have a deterrent effect.

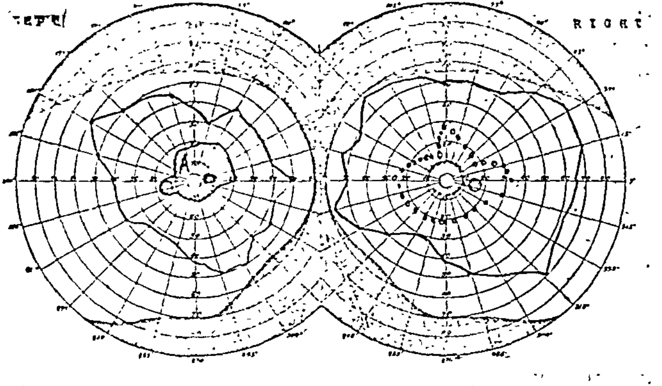
10. Poisoning by inhalation of the fumes of methyl alcohol generally occurs when the exhalations are mixed with rebreathed air, as in varnishing the interior of beer-vats, closets or small rooms, etc. It is also highly probable that in susceptible subjects repeated or even single methylated "alcohol rubs" may produce poisoning symptoms, through absorption of the spirit by the skin.

REPORT OF CASES

Reports of my two recent cases follow:

CASE 1.—Blindness from external application of some refined preparation of wood alcohol. W. H., aged 42, consulted me, Jan. 8, 1913, for sudden loss of vision. He gave the following history: For some years he has been a moderate drinker. He has been employed as general utility man in a large candy factory in Baltimore. There is used in this factory, according to his statement, a preparation called "spirits" for making shellac, with which to "varnish" certain kinds of candy. The patient suffered from what he supposed to be rheumatism, chiefly affecting the calves of the legs and hips. For a month or more prior to his loss of sight he had been using this "spirits" for rubbing the painful muscles. These applications were made usually twice, and sometimes three times a day. On the morning of January 6, after the usual rubbing, he had started for the factory. After working an hour or so, his sight became dim, he felt nauseated and decided to go home, a distance of probably 2 miles through the city. He walked to his house, which he barely recognized when reached. Within an hour he was totally blind. I saw him two days later. The pupils were widely dilated and inactive to light. Light perception was lost. Ophthalmoscopic appearances were negative. During the month or six weeks he was under observation, he occasionally regained a little vision. Once or twice he saw well enough to reach for my hand placed in different positions before his eyes. This vision seemed to be limited to some part of the nasal fundus, judging from the way he moved his head in order to see. This improvement was only transient and he relapsed to the condition first observed—total blindness. Both nerve heads are now atrophic with narrowed vessels. The patient's wife brought me a bottle of the "spirits" which her husband had used. Analysis, kindly made for me by Mr. Dunning, of Messrs. Hynson, Westcott & Co., proved this to be one of the refined preparations of wood alcohol. As the man was a moderate drinker of cheap whisky it was of course necessary to eliminate so far as possible the presence of wood alcohol in the alleged whisky sold at the bars where he drank. A list of five or six of these saloons was furnished me and I sent it to Dr. Fulton, of the State Board of Health. In turn he and Dr. Caspari sent their agents and purchased from these saloons their five-cent whisky. Analysis showed that none of these specimens contained wood alcohol. This is the only instance of blindness caused by external application of wood alcohol which has come to my notice. There is a factor of doubt because the man may have obtained whisky at saloons other than those mentioned to me; but he insisted that this was not the case, and that he never drank any of the "spirits" which he used for rubbing. Possibly inhalation may have had something to do with producing blindness; still, all the cases of inhalation blindness with which I am familiar have occurred in persons working in closed places, such as vats, vaults, etc., where rebreathed air necessarily becomes charged with the wood-alcohol fumes.

CASE 2.—Partial blindness, which will probably become complete, from drinking supposed and mislabeled "whisky" containing wood alcohol. February 4, 1913, H. E., aged between 20 and 30, was brought to me with the following history: January 24 he and some friends bought at a saloon in Baltimore several pint bottles of what was thought to be whisky. At any rate, according to the patient's statement, a special brand of whisky was asked for, and both the package containing the bottle and the bottle itself were so labeled. It was impossible to tell how much of the stuff was drunk. He worked on the 25th in the button factory where he was employed, and on the 26th was taken ill with headache, nausea, cramps, etc. The next day his sight was lost. He seems to have remained blind during the week before I saw him, occasionally having some vision, and then losing it entirely. When he was brought to the hospital by his employer he was totally blind. Both nerves were already showing evidence of atrophy. The only other lesion in either eye was a very minute left vitreous opacity well forward. There was not the least evidence of either recent or old trouble of any other kind, and the patient was sure that prior to this spree he had never had trouble with sight. The symptoms pointing clearly to wood alcohol, I tried to obtain remnants of the liquor used. There was none obtainable. Then the man's employer sent another employee to the saloon, where he asked for a pint of this brand of whisky. The liquor was brought to me in its package, which was labeled with the name of the brand. I delivered it in the same condition to Mr. Dunning, who found about 30 per cent. of wood alcohol. Later other specimens were purchased at this saloon by various persons connected with the man's employer, Mr. Dunning or the State Board of Health, and all of them, with, I understand, one exception, contained from 25 to 30 per cent. of wood alcohol. All were bought under the name of this brand of whisky and all were so labeled. The legal side of this case is now in the hands of the state's attorney.



Fields of vision, Case 2. Left eye: Outer line is white field. Blue and red were seen poorly, approximately 10 degrees within white line. Space A, total color scotoma, white: very faint. Dark spot in nasal field, absolute positive scotoma. Right eye: Outer line indicates the remarkably good white field, in view of total blindness when first observed. Intermediate line of hollow dots is red field. Inner broken line includes space of doubtful red perception, March 21, and color scotoma, April 3. Blue perception was nowhere definite enough to record.

The further history presents some interesting features. Wood alcohol, when it produces defective vision, causes either total loss of sight or central scotoma. As a rule, according to my observation, the prognosis in any case can usually be estimated if we see the patient at his worst; or, to put it in another way, the ultimate result is seldom better than the poorest vision observed at any given time. Until this degree of blindness has become fixed, there may be, for an unlimited period, variations in vision. This man was entirely blind when I first saw him. His pupils were inactive to light and dilated. Consequently I expect the ultimate result to be total blindness. At the same time there has been an apparent improvement, and it is to be hoped that some vision will remain. March 21 the right eye had one-fifth central vision, with fairly good field for white. Perception for blue was indeterminable. Red was seen peripherally, though in a narrowed field, while at the fovea, and for 10 degrees beyond, its perception was doubtful. The meaning of these color losses is that the retinal cells are partially, though as yet not entirely, destroyed, and that the optic nerves, certainly the central fibers, are undergoing atrophy. Two weeks later the right eye showed complete loss for red at and around the fovea, this central blind spot reaching at one point the peripheral red vision. At the same time central vision had become reduced to one tenth, a loss of one half since March 21. The peripheral limitations for white were unchanged. It looks as though a central scotoma is inevitable, as the best possible outcome, and I fear the atrophy will not stop there. The left eye, March 21, counted fingers doubtfully at 2 feet by eccentric fixation. At the nasal edge of the fovea there was an absolute scotoma, with a perifoveal area of very doubtful white perception. Colors were not seen at all in this area of doubtful white perception, while both red and blue were seen in a contracted field in the periphery. The field figures are appended. As to treatment, syphilis and tuberculosis were eliminated, the first by a Wassermann test, the second by careful clinical examination. There was no reason whatever to suspect either. The man was kept in the hospital and treated by diaphoresis, and later strychnin. At the very best the ultimate result will be complete scotoma from the center to the limits of doubtful white perception, while there is reason to fear that this scotoma will eventually break through to the narrowed white field. This will mean total blindness.

PREVENTIVE MEASURES WHICH OUGHT TO BE TAKEN

Preventive medicine makes it incumbent on the profession to prevent disease if possible. What can be done in view of this apparent revival of the wood-alcohol danger? There is no single purpose for which wood alcohol is used that is not filled by something safer. These substitutes are more expensive than wood alcohol, and this is the sole reason for employing the latter. Either the making of the stuff should be prohibited, or if its commercial use is allowed, safeguards should be thrown around it. The oft-repeated recommendation that it be made unfit for drinking purposes by the addition of some vile-tasting compound should be made mandatory if its use be allowed. Denatured alcohol, as it is called, contains a certain amount of wood spirits, but its taste and odor are so repellant as to make its bodily use, internally or externally, usually impossible. Individuals, firms or corporations using wood alcohol should be compelled to report the fact to the State Board of Health, and this board should have the legal right to regulate conditions surrounding the use of the poison. For instance, its use in vaults. vats and ill-ventilated places is a terrible menace to sight and life, and the state board should have the right to inspect and regulate such conditions. Those using it should take special pains to instruct their employees regarding its dangers. Its sales in groceries, drug-stores, etc., should be surrounded by the usual precautions taken with other poisons. Every bottle sold containing wood alcohol should bear the label "Poison—Totally Unfit for Either External or Internal Medical Uses." The State Board of Health should have the right to inspect barber-shops[6] whose proprietors without any evil intention whatever, could easily use preparations of "witch-hazel," cologne spirits, etc., made out of wood alcohol by unprincipled manufacturers. All these are but suggestions. The lesson which I wish to impress from these cases is that commercial greed is again threatening the community with this insidious poison, and that it is the duty of our profession to combat this tendency in every possible way.

842 Park Avenue.

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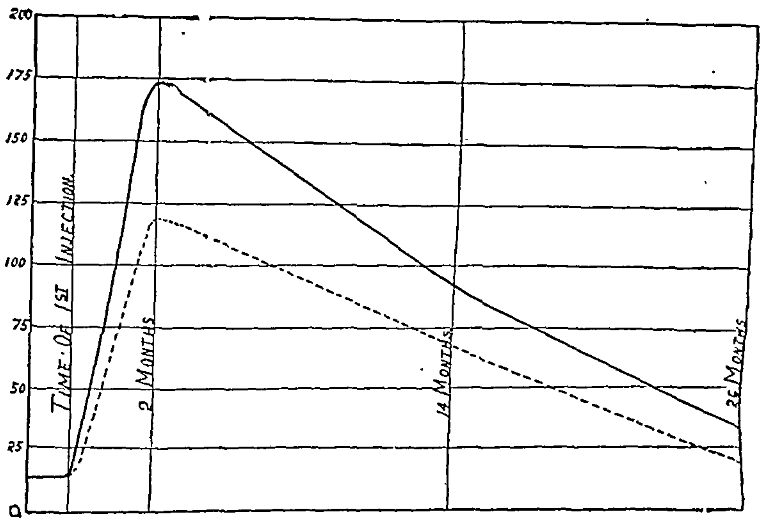
[6] The subject of barber-shops is touched on in the editorial, Wood Alcohol—Poison, THE JOURNAL A. M. A., April 19, 1913, p. 1231

EXPERIMENTAL IMMUNITY IN RELATION TO THE AGGLUTINATION REACTION IN TYPHOID*

VIRGIL H. MOON, A.B., M.Sc.
CHICAGO

The prevention of typhoid fever by injecting killed typhoid bacilli into the body is a comparatively recent procedure which is rapidly becoming general. The question naturally arises, How long will the immunity thus produced persist after treatment? It is impracticable to determine this by direct experimentation on the immunized patient, but it is known that acquired immunity is associated with the presence of antibodies in the blood, and the persistence of these may be taken as an approximate index to the persistence of the immunity.

In November, 1910, a number of students at Kansas University were availing themselves of the antityphoid inoculation offered by the university authorities, and it occurred to me as an opportunity to follow the effect of this treatment on the agglutinins of the serum. Accordingly a sample of blood was taken from each of a number of students previously to the first injection and the serum tested for agglutinins. As stated in a previous report[1] the dilutions above which these normal serums showed no agglutination ranged from 4 to 16. Three injections were given, at intervals of one week or ten days, of a suspension of killed typhoid bacilli. This was made by washing the bacilli from the surface of twenty-four-hour agar cultures with salt solution, and sterilizing at 60 C. (140 F.) for an hour on three consecutive days. The suspension contained approximately 1,000 million bacilli to the cubic centimeter as estimated in the Thoma-Zeiss counting-chamber. The first injection consisted of 0.5 c.c., the second of 1 c.c. and the third of 2 c.c. or 2,000 million bacilli. Only a few students took the third injection, and these gave symptoms of malaise, dizziness, headache, mental dulness and slightly elevated temperature for two or three days following. These symptoms were present in a minor degree after each of the first two injections.



Agglutination curves; solid line, average curve of those who received three injections: line of dashes, average curve of those who received two injections.

Samples of the serums were again tested for agglutination after the inoculations at intervals of two months.

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* From Kansas University and the Memorial Institute for Infectious Diseases, Chicago.

[1] Tr. Chicago Path. Soc., 1912, viii, 252.

one year, and two years respectively. The results are given herewith in tabular form. The accompanying curve of agglutination represents the average curves of all those tested except that those who were reinjected twelve months later were omitted from the subsequent averages. The crest of the curve is represented at the two-month interval, although from the data at hand we cannot determine whether it should occur exactly at this time or somewhat earlier or later.

AGGLUTINATING POWER OF SERUMS TESTED BEFORE AND AT VARIOUS INTERVALS AFTER ANTITYPHOID INOCULATION

Name	Agglutination				Remarks
	Before	2 Mo.	1 Yr.	2 Yrs.	
W. S.*	8	192	96	12	Typhoid 10 years before
D. S.	32	128	192	16	Typhoid 8 years before
E. W.*	12	256	64	32	Typhoid 9 years before
H. C.*	4	96	192	64	Reinjected 12 months later
T. A.	16	96	256	..	Reinjected 12 months later
P. C.*	24	192	128	..	....
W. W.*	8	192	48	..	....
L. F.*	16	192	96	8	....
W. Q.	8	64	48	16	....
C. J.	8	128	48	16	....
J. L.	16	128	24	12	....
J. M.	8	128	48	8	....
H. J.	16	192	32	..	....
C. H.	12	96	96	12	....
A. H.	16	96	48	12	....
V. M.	16	128	64	32	....
M. S.*	16	96	..	..	....
E. B.	16	64	..	..	....
M. C.	12	64	..	..	....
M. B.	8	128	..	..	....
Control	16	16	..	..	....
Control average of 4 normal serums			12	9	....

* Received the third injection.

The numbers in the table do not represent complete agglutination, but represent the highest dilution at which definite clumping of the bacilli was observed. This was determined by microscopic examination after two hours at room temperature. Attention should be called to the fact that the strain of typhoid bacilli used in making the last two series of tests was more resistant to agglutination than that used in the first two series, as shown by the controls. Hence the amount of agglutinins present was relatively greater than the figures of the last two columns show, though they have almost disappeared after twenty-six months.

It cannot be assumed that the degree of resistance to the disease runs directly parallel with the agglutinins of the serum, since other antibodies than agglutinins are concerned in the production of immunity and these are present in varying proportions at different times. It is believed that a patient who has had typhoid fever retains resistance to the disease after the agglutinins have disappeared from his blood. Naturally it would be expected that the same would hold true with immunity produced by antityphoid inoculation.

Another side of the experiment is that which has to do with the agglutination reaction as a diagnostic test. It is self-evident in this experiment that if one of these students had suffered from a disease of obscure character and the attending physician had based his diagnosis on a positive agglutination test, the result might have been a serious error. Considering this phase together with the increasing use of antityphoid inoculation, the physician should be on his guard, and before placing any reliance on a positive agglutination reaction should assure himself that the patient has not been inoculated with typhoid bacilli within at least two years.

1743 West Harrison Street.

WHERE IS THE FUNDUS OF THE BLADDER?[*]

BRANSFORD LEWIS, B.Sc., M.D.
ST. LOUIS

Some years ago my attention was attracted to what appeared to me a curious eccentricity of nomenclature in vesical anatomy, namely, that of applying to the top of the bladder the term "fundus"; a word evidently allied to and having a common origin with such words as "foundation," "fundament" or base. It seemed unreasonable and illogical, and yet the evidence that it was correct appeared on all hands; in all current writings such usage was in vogue. On the other hand; the term "fundus of the uterus," in which the base was pointed upward, seemed unquestioned as to its authenticity and anatomic regularity.

So for a time my doubts were quieted; but gradually my Missouri instinct prevailed and I sought headquarters for information on the subject. Every book on anatomy that I consulted not only failed to give sanction to such usage, but also applied the term "fundus," as do the French in *bas fond*, to the base of the organ. It was described as synonymous with the word "base," and located at the bottom, instead of the top of the organ.

I occasionally mentioned this fact to medical friends in a casual way, and found a contest always awaiting the proposition. It required a treatise on anatomy and a shotgun to support the contention.

I recall that in 1910, when one of our esteemed members was about to read a paper entitled "Carcinoma of the Fundus of the Bladder," I caused him some perturbation for the time being by suggesting that possibly the term "summit," or "vertex," would more correctly represent the area to which he was about to refer in his paper; but his doubts were quickly allayed when he conferred with several members present, who evidently disagreed with my position and confirmed the correctness of the title as given in the program; and so it was read and to-day stands printed in our Transactions of that year. In this paper the author, Dr. Hagner, says: "The fundus of the bladder is a comparatively rare location for new growths, the more common seat being the base"—indicating the fundus as the antithesis of the base.

Some time later, when a guest at a dinner given in Chicago to a dozen or so of urologists, I happened to mention this incident and the point of contention. I was saved from mob violence at the hands of those present only by the existence in the host's library of several books on anatomy of undoubted authority, all of which gave me unqualified support.

To be convinced of the fact that the use of the term fundus of the bladder is widely prevalent in current writings, even by men of high standing in the profession, one need only review recent literature on bladder surgery. Authors of modern text-books also use the term in the same sense. Thus, Keyes, Junior,[1] describes the divisions of the bladder: "These four sides meet above in the fundus, below and in front in the neck, which is the urethral orifice." Many other authors no less distinguished locate the fundus at the summit of the bladder.

On the other hand, Guiteras[2] says: "The base or fundus looks downward and backward." Watson and

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[*] Read before the American Urological Association, at Boston, April 16, 1913.

[1] Keyes: Genito-Urinary Diseases, 1904, p. 328.

[2] Guiteras: Urology, 1912, i, p. 46.

Cunningham[3] divide the bladder into the summit or apex, the body, the base and the neck or cervix. While the word "fundus" is not used in this connection, we find it mentioned by these authors on page 539 of the volume quoted in connection with the location of tumors of the bladder, thus: "None of these three tumors occupied the same part of the bladder as the original one; the former was on the right side of the trigone; those found at the second operation were near the fundus." But the question remains, where is the fundus?

It is apparent, therefore, that ambiguity and confusion attend the use of this term with reference to the bladder, and it would be worth while to straighten out the tangle. This may be done by referring to all of the modern treatises on anatomy of recognized authority. In all of these, without exception, the following divisions of the bladder are given: (1) the summit or vertex; (2) the base or fundus; (3) the body, and (4) the cervix or neck. There are, naturally, variations in the wording of the divisions, but there is no lack of harmony in the use of the term "fundus of the bladder."

I believe, therefore, in view of the prominence of this term in medical literature, of the frequency with which it is used in writings on vesical surgery and the evident confusion to which it has been reduced, that it is deserving of a better fate. Further, it should be recognized as having its own proper location and sphere of activity, and, like the conventional tub, the bladder should be permitted to stand on its own bottom, namely, the base or fundus.

550 Century Building.

RARITY OF SARCOMA OF SCLERA

REPORT OF A CASE WITH REMOVAL AND NO RECURRENCE

RICHARD M. NELSON, M.D.
ATLANTA, GA.

The rarity of sarcoma, and especially of primary sarcoma, of the sclera is a fact admitted by some of the leading authorities in ophthalmology and pathology. Many give it scant attention, while others, like May[1] and Adami and Nicholls[2] make no mention of it.

In view of its rarity, a report of the following case of primary sarcoma of the sclera may prove of interest.

Patient.—E. W., colored Jamaican, aged 25, was referred to Out-Eye Clinic, Colon Hospital, Cristobal, Canal Zone, late in October, 1906. Two years before patient had noticed feeling in left eye as if there was a piece of gravel in it, as also a small swelling or tumor. This tumor grew gradually until a month or more before patient came to the clinic, about which time the growth became much more rapid. When I first saw patient the tumor was quite noticeable. Vision had been failing for the past four months. Pain had been neither pronounced nor frequent.

Examination.—Tumor was located under bulbar conjunctiva inferiorly, and thus partly concealed by lower eyelid. There were bluish spots over tumor, evidently congested veins. On admission to eye-ward of hospital late in November, the tumor had either grown so in size or caused such swelling of the superimposed conjunctiva that a roll of the latter partly obscured and was in contact with the cornea. Cervical lymph-nodes of the left side were greatly enlarged. Clinical diagnosis made of malignant growth of sclera, probably sarcoma. Abscission or, failing in that, enucleation of the eye, was advised and consented to.

Operation.—Early in December, 1906, under general anesthesia, I tried to remove the tumor, assisted by Dr. Lloyd Noland, chief of surgical clinic, but soon found that it would be impossible to do so without destroying the eye, and so did an enucleation. On laboratory examination the tumor proved to be a small round-cell sarcoma of sclera, and was so reported by Dr. Norman Williamson, pathologist.

About ten days later I assisted Dr. Noland in an operation on same patient. By extensive work the affected cervical lymph-nodes before noted were removed as thoroughly as possible. About two weeks later, the patient was delirious for a few days, and we feared metastasis to brain; but the delirium left him. He was in due time discharged and fitted with an artificial eye. I saw him at intervals, never greater than six months, up to his last visit to me in March, 1912, five years and three months after last operation. Patient had continued in splendid health, with no signs of recurrence.

There is a difference of opinion among writers as to the malignancy and proneness to recur of epibulbar sarcoma. Derby[3] quotes both sides with seeming fairness. On the one side Strouse's statistics of twenty-four cases, with his conclusion that conservative measures, including primary abscission, are not contra-indicated. On the other hand Verhoeff and Loring, with the most complete statistics yet published of fifty-three primary abscissions, conclude that "after abscission the tumor sooner or later usually recurs and general metastases are not infrequent." Berry and Parsons, and apparently Derby himself, are strongly inclined to the same belief as Verhoeff and Loring, and thus all favor enucleation of the affected eye, rather than abscission of the tumor.

I wish to thank Col. W. C. Gorgas, Chief Sanitary Officer, Isthmian Canal Commission, for permission to report this case.

805 Empire Life Building.

BILATERAL AND MULTIPLE ECTOPIC PREGNANCY

ELLICE McDONALD, M.D.
AND
WILLIAM A. KRIEGER, M.D.
NEW YORK

Multiple ectopic pregnancy is by no means an uncommon occurrence. Like a great number of other medical rarities, it has been more frequently found when observers are educated to look for it.

The fact that twin ectopic pregnancy is proportionately more common than is normal twin uterine pregnancy has led Barnes to suggest that twin conception is a cause of ectopic pregnancy. This, however, is mere theory and has no definite basis of proof.

Multiple ectopic pregnancy may be divided into several classes. There may be pregnancy in the uterus with a tubal pregnancy; this is called combined pregnancy. There may be a pregnancy in each tube—bilateral ectopic pregnancy. There may be a pregnancy with both embryos in one tube—twin tubal pregnancy. These conceptions may begin at the same time or one may begin later than the other, or they may begin at the same time and the development of one may be retarded and the other may continue to grow. As a result of this, the fetuses are very often unequal in size and the varieties of multiple ectopic pregnancy may best be shown by the following table.

Twin ectopic pregnancy has been recorded a number of times in recent years. It is usually found only in

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3. Watson and Cunningham: Genito-Urinary Diseases, 1908, i, p. 435.

1. May: Diseases of the Eye, Ed. 4, Revised, 1905.

2. Adami and Nicholls: The Principles of Pathology, Ed. 1.

3. Derby, George S.: A System of Ophthalmic Operations, Edited by Casey Wood, 1911, p. 646.

TABLE 1.—MULTIPLE ECTOPIC PREGNANCY

Bilateral Ectopic Pregnancy:
1. Simultaneous.
2. Different ages.
3. One ovarian, one tubal.

Twin Tubal Pregnancy:
1. Simultaneous.
2. Different ages.
3. Twins on one side and one fetus on the other.

the early stages of the disease and so, since the treatment of the disease by operation, this condition has been increasingly found. It must be remembered that it was only in 1883 that Veit did the first operation with a confirmed diagnosis of ectopic pregnancy and Janvrin in 1888 was, we believe, the first in this country. So the condition has not had a great number of years of study.

It is difficult always to distinguish whether cases of ectopic pregnancy are true twin pregnancy. Many cases that have been reported as twin pregnancies are cases in which one gestation has been retained in a tube and another has been deposited in the same tube. Cases have been reported in which the first was retained as a lithopedion and a second tubal pregnancy occurred in the same tube. Several cases have been reported, in which there has been a gestation retained in one tube and by transmigration of the ovum a conception came from the opposite ovary and deposited itself in the tube already holding the first gestation.

The fetuses of a simultaneous twin tubal gestation are not always of the same size. One may die or its growth cease, while the other may thrive and grow. This is also possible when the fetuses are nourished by a single placenta.

As a result of these vagaries, it is always difficult to say whether the fetuses in a twin tubal pregnancy are really twins and of the same age or whether it is only a repeated tubal pregnancy in which one conception has followed another in the same tube. We have collected thirty-nine cases of twin tubal pregnancy in which the evidence is reasonably sure; that is, the fetuses are either of the same size and character or are nourished by a single placenta, or the careful history gives no other record of more than one syncopal attack. This, it

TABLE 2.—BILATERAL ECTOPIC PREGNANCY, PROVED CASES

Author	Reference	Right Tube	Left Tube	Remarks
Byford	*Am. Jour. Obst.*, 1893, xxviii	Fetus	Fetus	Different ages
Burford	*Med. Press and Circ.*, 1905, lxxix, 533	Fetus 28 mm.	Fetus 41 mm.	Same age
Boissard and Coudert	*l'Obstetrique*, 1900, iii, 6	Fetus	Fetus	
Galabin	*Brit. Med. Jour.*, Oct. 10, 1892	Fetus	Fetus	
Von Ott	*Jour. Geburtsh. u. Gynäk.*, 1892, p. 482	Fetus	Fetus	Same age
Martin	*Ztschr. f. Geburtsh. u. Gynäk.*, 1897, xxxviii, Part 1, p. 144.	Fetus	Fetus 2 mm.	Different ages
Ruder	*Deutsch. med. Wchnschr.*, 1902; p. 50	Fetus 2 mm.	Fetus 3 mm.	Different ages
Psaltoff	*Ann. de gynéc. et d'obst.*, 1903, lix, 376	Fetus 4 mm.	Fetal mummy 3 yrs.	Different ages
Walter	*Brit. Med. Jour.*, 1892, ii, 732	Fetus	Fetus	Different ages
Ferguson	*Edinburgh Med. Jour.*, February, 1899	Lithopedion	Fetus	Different ages
McCalla	*Surg., Gynec. and Obst.*, March, 1909	Fetus	Fetus	Different ages
Werth	Winckel's Handbuch der Gynaekologie, ii, 2	Fetus 32 mm.	Fetus	Same age, 8 weeks
Finsterer	*Ztschr. f. Heilk.*, 1909, xxviii, Supplement	Fetus	Fetus	Same age, 8 weeks
Launell	Mittheilungen aus der gynaekologischen Klinik des Dr. Otto Engstrom, 1910, vii, 2.	Clot. Chor. Villi	Fetus	Same age, 8 weeks
Findley	*Surg., Gynec. and Obst.*, July, 1910	Clot. Chor. Villi	Clot. Chor. Villi	Same age, 8 weeks
Davidsohn	*München. med. Wchnschr.*, Jan. 6, 1912	Fetus	Fetus	Same age, 6 weeks
Moreau	*Thèse de Paris*, 1853	Fetus	Fetus	
Polak	*Brooklyn Med. Jour.*, 1904, xviii, 242	Fetus	Fetus	L. Interstitial
Pozzi	Soc. d'Obst. et Gyn. Paris, Jan. 14, 1901	Fetus 4 mm.	Fetus 7 mm.	Different age
Milligan	THE JOURNAL A. M. A., Jan. 13, 1912, p. 114	Fetus	Fetus	Same age
Launay and Seguinot	*Rev. de Chir.*, April, 1911	Fetus 3 mm.	Twin fetuses smaller	All same age
Winckel	*Verhandl. d. deutsch. Gesellsch. f. Gynäk.*, 1888, ii, 82.	Fetus	Fetal mummy	Different ages
Labbardt	*Beitr. z. Gynäk. u. Geburtsh.*, 1910, xiv, i, 155.	Clot. Chor. Villi	Clot. Chor. Villi	No fetuses
McDonald & Krieger	This paper	Fetus	Fetus	Different ages
McDonald & Krieger	This paper	Fetus	Clot. Chor. Villi	Same age

TABLE 3.—BILATERAL ECTOPIC PREGNANCY PROBABLE, BUT NOT PROVED

Author	Reference	Right Tube	Left Tube	Remarks
Frederick	*Am. Jour. Obst.*, November, 1901	Ruptured blood-clot.	Ruptured clot	
Rosenstein	*Deutsch. med. Wchnschr.*, March 26, 1904	Fetus	Blood-clot	
Bloom	*Philadelphia Polycl.*, 1894, iii, 292	Clot	Clot	Uterine abort. 3 weeks before
Christie	*Medicin. Revue*, 1897, xiv, 1	Fetus 2 mm.	Tubo-ovar. clot	
Kristmus	*Wien. klin. Wchnschr.*, 1902, xv, 47	Fetus	Clot	Syncytial cells
Noble, G. A.	*Am. Jour. Obst.*, April, 1901	Fetus 8 wk.	Clot	Hemorrh. from uterus
Robbins	*Atlanta Jour. Med.*, April, 1901	Fetus 6 wk.	Unrupt. clot	
Barker	*Surg., Gyn. and Obst.*, 1907, v, 1	Clot	Fetus	Uterine memb. passed
Wilson	*Austral. Med. Jour.*, 1909, xxix, 4	Clot	Clot	Two syncopes
Greenberg	THE JOURNAL A. M. A., Aug. 17, 1907, p. 575	Clot	Clot	Bleeding into bladder
Weinleckner	*Ber. d. Geburtsh.-Gyn. Gesellsch. Wien*, April 12, 1900.	Clot	Clot	Corpus luteum in each ovary
Savage	*Brit. Med. Jour.*, 1892, i, 556	Clot	Clot	
Grosser	*Tr. Lucerne Co. Med. Assn*, Wilkes-Barre, 1903, xi, 126.	Clot	Clot	
Chandler	*New York Med. Jour.*, 1903, lxxviii, 320	Fetus	Clot	
Torrio	*Finska Läk.-sällsk. handl.*, 1896, xxxviii, 9	Clot	Clot	
Giglio	*Ann. di obst. e gin.*, 1898	Clot	Clot	
Heady	*Cincinnati Lancet-Clinic*, 1897, xxxix	Clot	Clot	
Janeway	*Med. Rec., N. Y.*, 1879, xvi	Fetus	Clot	Corp. lut. in left ovary
Jayle and Mandrot	*Rev. gyn. et chir. abd.*, 1904, viii, 195	Fetus	Clot	
Johnson	*Boston Med. and Surg. Jour.*, 1894, cxxx, 256	Clot	Fetus	
Stehman	*Am. Gynec. and Obst. Jour.*, June, 1896	Clot	Fetus	
Rabinovitch	*Thèse de Paris*, 1906, No. 48	Fetus	Clot	
Rowan	*Austral. Med. Jour.*, 1890	Clot	Clot	
Riegenbeck von Heukelom.	Recueil des travaux anatomo-pathologiques du Laboratoire Boerhaave, Leyden, 1899.	Fetus	Clot	
Taconnet and Lefort	*L'Echo méd. du Nord, Lille*, 1899, ix, 139	Fetus	Clot	
Newton	*Boston Med. Jour.*, Aug. 26, 1905	Fetus	Clot. Decid. cells	
Coffey	Proc. West. Surg. and Gyn. Assn., Dec. 30, 1909	Fetus	Clot	

must be confessed, is not very accurate evidence, but it is the best available. The citation of the cases would offer little of interest save for some isolated ones.

Treub, for example, has the photograph of five embryos, removed by a colleague from one tube. They were about 3 or 4 months old and apparently all of the same age. Krusen has reported triplets in one tube, and Launay operated on a patient with twins on one side and a single fetus on the other, all apparently of the same age—about 3 months.

Sometimes there is only one sac; sometimes there are two sacs. One ovum is sometimes found free and sometimes both are free. It is not exactly correct to call a gravid tube with two fetuses a twin tubal pregnancy, but it is very difficult to prove it is not. Occasionally the history is so definite as to isolate the two gestations or the character of the fetuses may be so different as to make it sure that they are of different ages. It should be remembered, however, that one may grow and the other may not, even if they are conceived at the same time, and that repeated conception may occur in the same tube.

Bilateral ectopic pregnancy is subject to the same uncertainty. One gestation may be retained and another occur in the other tube. A lithopedion even may be in one tube and a gestation occur in the other tube. Then again, it is possible for the gestations to be of the same age and the growth of one to be stopped, while the other continues. Of the bilateral ectopic pregnancies here collected, where the ages were noted, in eleven cases the fetuses were of the same age, and in ten cases they were of different size and apparently of different ages.

An interesting fact in the study of bilateral ectopic pregnancy is that the presence of blood-clot in a tube when the opposite tube contains a fetus is no proof that gestation has occurred in both tubes. The presence of decidual cells in one tube, while the other has a gestation, is no proof that gestation has occurred in the tube with decidual cells and no fetus.

Definite decidua has been reported in the uninvolved tube by Kroemer,[1] Haultain[2] and others. In two cases of our own, in which the uninvolved tube was removed to prevent recurrence, as the women already had several children and the percentage of recurrence is one in twenty, there were decidual cells present in the apparently normal tubes.[3]

Ferroni has also shown that in the microscopic study of tubes removed for other conditions, all those tubes which contained blood showed decidual cells. All the cases of hematosalpinx had decidual cells, usually found in some of the folds of mucous membrane and disposed of in patches where there were no adhering coagulations. Over these patches the investing epithelium is well preserved as in other parts of the tube. The reaction was absent in all cases of fluid distention, which was not bloody or only in part bloody. Bazy[4] has reported cases of hemorrhage inflammation of the tubes, which by its clot may simulate tubal pregnancy without any gestation being present.

For these reasons, in the exact anatomic diagnosis of tubal pregnancy, the presence of clot in the tube or the presence of the decidua reaction is not sufficient. To make an exact diagnosis of bilateral ectopic pregnancy, there must be either a fetus or chorionic villi in each tube. In such a rare condition, the diagnosis should be exact. Chorionic villi are essential to placental formation and never exist without pregnancy, while decidual cells may be both in the tube and uterus.

For these reasons, reports of fifty-two cases reported as bilateral ectopic pregnancies have been collected into two groups: one of which has a definitely proved fetus on each side or chorionic villi on each side, and the second which consists of cases that have not this proof or have not been thoroughly studied. In this second table, it is probable that most of the cases are true bilateral ectopic pregnancy, but search has not been made for chorionic villi in the walls of the tube.

We have added to these lists two cases which are of interest. One patient had apparently three pregnancies, one in each tube and a uterine one which miscarried. She had two separate and individual ruptures with shock and collapse. The full histories are appended with the pathologic reports.

CASE REPORTS: BILATERAL ECTOPIC PREGNANCY

Case 1.—*History.*—Patient, aged 38, married, tertipara, *complained of pain in lower abdomen and* uterine hemorrhage. History at that time showed that the patient had suffered from pelvic inflammatory disease about two years previously. Three months before entering hospital failed to menstruate, but menstruated profusely two months before. At that time she had an attack of fainting *and thinking it a natural consequence called no physician. Bleeding* was very profuse. From that time on she had symptoms of pregnancy *and* believed herself to be so. Hemorrhage continued varying in amount, although always present each day from May and the patient was confined to bed from that time up to entering the hospital. *After entering the hospital,* condition continued every day the same until July 5, when the abdominal pain was greatly aggravated and the patient was *in a condition* of shock from which she slowly rallied.

Examination.—The patient was very pale *and anemic,* pulse 110, temperature *99. There was abdominal distention and* tenderness *on superficial palpation.* An irregular mass was felt over the symphysis about as large as a grapefruit, and both the inguinal rings were fuller than normal. Intestines were generally tympanitic. The glands were found to be enlarged and soft on abdominal *examination. A boggy* mass of irregular consistence filled uterus and entire pelvis, a portion being so firm as to give the impression of a fibroid, the other portion feeling like a recent hematoma. Neither the body nor the appendages could be identified from this general mass. The vaginal wall and cervix were cyanotic. Breasts were swollen and contained colostrum. In view of the clinical history and of the occurrence in May and July a diagnosis of ectopic pregnancy with multiple hemorrhages was made.

Operation.—An immediate operation was performed. Large quantities of partly coagulated and fluid blood, *no* way encapsulated, was found. Uterus, ovaries and blood-clot filled the pelvis, and it was difficult to demonstrate anatomic relations. Patient was placed in the Trendelenburg position and adhesion separated, so that the anterior wall of the uterus could be identified. By careful dissection of the adhesions both the lateral masses were removed, *consisting of* diffuse hemorrhages and tumor mass.

Postoperative History.—The family physician stated that four or five days after the operation the uterus expelled *en masse* the remains of placental tissue and fetus. He examined this personally and made the report. The patient made a slow recovery.

Pathologic Report.—The specimen consists of both tubes and ovaries, together with two fetuses.

The ovaries are normal in size. One ovary measures 3 by 2 by 1 cm., and is normal in appearance. The other ovary is larger, measuring 3.5 by 2 by 1 cm., and on section *is* found to contain a very large corpus luteum of pregnancy. There are a few adhesions on each side between the tubes and ovaries.

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1. Kroemer: Arch. f. Gynäk., 1903, lxviii, 57.
2. Haultain: Jour. Obst. and Gynec., Brit. Emp., 1906, ix, 6.
3. These specimens were examined at the Bender Laboratory. We owe thanks to Dr. R. M. Pearce, late director.
4. Bazy: Rev. de gynéc., 1911, xx, July.

Both tubes are greatly enlarged and contain a brownish-red material, having the appearance of clotted blood. Springing from each tube at one point is a fungoid mass of grayish-white granular-looking growth, which has the characteristic appearance of masses of chorionic villi. Connected with each tube is a fetus. On one side the fetus is well preserved, is 9 cm. in length, and is attached to the material having the appearance of chorion by an umbilical cord 15 cm. in length. In this fetus the finger-nails are already apparent; the external ear, although still rudimentary, can be made out, and the eyes and other features are fairly well developed. The cavity of the mouth and tongue are well formed. The fetus on the other side appears to have undergone an arrest of development. It is brownish in color. Its lower limbs are perfectly apparent, as are its upper ones, but its trunk and head are contained in a well-defined capsule composed of firm tissue, apparently of the nature of connective tissue. A definite head and face cannot be made out in this fetus. In the portions apparent the fingers and toes are differentiated and the finger-nails are well formed.

Anatomic Diagnosis.—Bilateral extra-uterine pregnancy.

Case 2.—*History.*—Patient, aged 28, housewife, complained of pain low in abdomen on left side. Menstruation was normal. Last period was slightly less than usual (see below). Patient noticed soreness in left lower abdominal quadrant about fifteen days before examination and had twinges of pain in this region. About five days later physician noticed a tumor at this site. If lying down and turning toward right side, she could feel something drop, from left to right, felt as if something were going to fall out of her. She had distinct sensation of pain at last menstruation, which lasted three days, stopped for a very short time, and then began as a continuous flow of brownish, watery fluid.

Operation.—On opening the peritoneal cavity there was found a small amount of free, blood-stained, turbid fluid. Partially beneath the sigmoid on the left side and firmly bound down by new-formed tissue was a mass the size of a small orange. This was the left tube and ovary, the seat of an ectopic pregnancy. The adhesions being broken up with some difficulty, the mass was brought up and the tube and broad ligament on the left side were clamped off and removed. The right ovary was macerated and lay behind the uterus and bound down by adhesions in the pelvis. This ovary was about the size of a hen's egg. On breaking up the adhesions this appendage was found the seat of a second ectopic gestation. This tube and the ovary (which was intimately associated with the ectopic mass) were removed and tied in the same manner as on the left side. The remaining portions of the broad ligaments were brought over and sutured to the cornua of the uterus, thus walling off from the abdominal cavity the raw surfaces produced by the liberation of the bound-down appendages. The patient's recovery was uneventful.

Pathologic Report.—Specimen consists of (1) fallopian tube 10 cm. long and (2) gestation sac. (1) Peritoneal surface in proximal two-thirds is grayish pink, smooth and glistening and tube is slightly thickened. In distal one-third peritoneum is greenish brown. Fimbriated extremity is absent and represented by a soft boggy mass measuring 6 by 4 by 4 cm. On section cut surface is irregular, reddish brown and is apparently blood. (2) The sac is a round somewhat firm mass; the outer surface varies in color from grayish yellow to bluish black. Surface in part is rough, due to dissection and in part covered by peritoneum and has numerous fibrous tags attached. On section cut surface shows a cavity within the mass lined by a smooth glistening membrane. Within this cavity is a fetus about 2.5 cm. long, which is attached to the wall by a cord. About this cavity the cut surface is mottled reddish-brown in color.

Anatomic Diagnosis.—Double ectopic gestation. Chronic pelvic peritonitis. Decidual cells and chorionic villi shown by sections from the walls of the sac of each tube. Necrosis of the decidual tissue and thrombosis.

174 West Fifty-Eighth Street

EROSIVE AND GANGRENOUS BALANITIS

THE FOURTH VENEREAL DISEASE

A FURTHER REPORT*

B. C. CORBUS, M.D.
Professor of Genito-Urinary Diseases, College of Physicians and Surgeons, Medical Department, University of Illinois
CHICAGO

In May, 1909, Dr. Frederick G. Harris and I[1] reported our observations on a specific form of balanitis, due to a symbiosis of a spirochete and a vibrio.

This was the first time in this country that attention was drawn to this specific form of balanitis, although abroad Scherber and Müller[2] had classified this form of infection and proved conclusively that balanitis gangraenosa was identical with the *balano-posthite érosive circinée* of Bataille and Berdal,[3] only representing different degrees of severity.

Notwithstanding the fact that reports have come from McDonagh[4] in London, Scherber[5] of Finger's clinic in Vienna, Dind[6] in Switzerland, Romeo[7] in Italy and Kallionzis[8] in Greece, since Scherber and Müller's[2] publication in 1904, an extended search of the American current literature and text-books still shows a lack of appreciation of the virulency of these organisms.

Scherber's second and extensive communication[5] on the different forms of balanitis, published in 1910, describes the condition in detail.

Erosive or gangrenous balanitis is a specific infectious venereal disease, with local and constitutional symptoms varying with the severity of the infection. The cause is a symbiosis of a vibrio and a spirochete. These two organisms are always found together. Both have been demonstrated in sections, in the blood-vessels and in the inguinal nodes.

Predisposing causes are (1) a long, tight foreskin excluding the air, always present to a greater or less degree; (2) wetting the labia or penis with saliva, and (3) unnatural sexual relations, after alcoholic excesses.

In private practice in this country the disease is uncommon, probably occurring once in two hundred cases; but in dispensary work, in which material comes from the lower walks of life, the infection is fairly common. Scherber[5] reports eighty-one cases that occurred in Finger's clinic in four years.

That more cases are not reported in this country is due, I believe, to the lack of recognition, and it is with this idea in view that I have had the accompanying illustrations made.

BACTERIOLOGY

Abundant evidence is at hand to show that in noma and in Vincent's angina the etiologic factors are a spirochete and a vibrio. Rona[9] says that "noma begins without exception in gangrenous stomatitis. If the fusiform bacillus and spirochete found in the mouth are etiologic factors in gangrenous stomatitis, since the organism is found in such abundance in noma, it must be due to the same cause."

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* Read before American Urological Association, April 15-17, Boston.

1. Corbus, B. C., and Harris, Frederick G.: Erosive and Gangrenous Balanitis, the Fourth Venereal Disease, The Journal A. M. A., May 8, 1909, p. 1474.
2. Scherber and Müller: Arch. f. Dermat. u. Syph., lxxvii, 77.
3. Bataille and Berdal: Méd. mod., 1891, ii, 340.
4. McDonagh: West London Med. Jour., 1911, xvi, 131.
5. Scherber: Handbuch der Geschlechts-Krankheiten, 1910, i, 153.
6. Dind: Rev. méd. de la Suisse Rom., 1911, p. 592.
7. Romeo: Gazz. d. osp., Oct. 4, 1910, p. 1257.
8. Kallionzis: 'Εν Σύρῳ, 1910, xv, 385.
9. Rona: Arch. f. Dermat. u. Syph., 1905, lxxiv, 171.

1905, Weaver and Tunnicliff[10] described a fusiform lus which was isolated in pure cultures in cases of ent's angina and ulceromembranous stomatitis. r, Tunnicliff[11] described three strains of fusiform li isolated in pure cultures from the normal mouth. e resembled the organisms which she found in ent's angina and in ulceromembranous stomatitis.

the first publication on this subject, by Harris myself,[1] numerous authors were cited and abundant cal proof was obtained to substantiate the pathocity of these organisms.

he accompanying photomicrograph (Fig. 1) from nicliff's[12] work shows typical vibrios and spirochetes ıred from a case of noma, and Tunnicliff believes the nism to be one and the same only representing erent stages of development. Ellerman[13] takes exception to this, however, calling attention to the lack of ility of the cultured organism.

have repeatedly examined the spirochetes found in cent's angina under the dark-field illuminator. e the organism is identical with that found in ive and gangrenous balanitis, the motility being of the characteristic and diagnostic features.

ince the conditions that favor the growth of these anisms—heat, moisture, filth and absence of air— more ideal in the genitalia than in the mouth, it is y to conceive how an organism may leave its normal rophytic domain and under proper anaerobic conions become pathogenic and produce extensive truction.

Examinations of vaginal secretions of one hundred mal women[5] showed bacteria and spirochetes similar those found in smegma, but no spirochetes of mitis.

n eleven cases of clinically evident vulvitis and initis, vibrios and spirochetes were found.

ETIOLOGY

As shown in Figure 2, the vibrio and spirochete are e predominating organisms found. We can easily gue, as did Rona, in 1905, that if the fusiform cillus and the spirochete found in the mouth are iologic factors in gangrenous stomatitis and gingitis, erosive and gangrenous balanitis must be due to e same cause, since the organisms are found in such undance in these conditions, and especially since in e histories of all my cases unnatural sexual relations r a wetting of the labia were admitted.

The vibrio grows under anaerobic conditions on erum-agar. It occurs singly or in chains of two or nore individuals. It is a slightly curved rod-shaped rganism with pointed ends, measuring about 2 microns n length and 0.8 microns in width. It stains by the rdinary dyes and is Gram-positive, although the decolorization must be performed very carefully, as the organism gives up the gentian violet readily. It is preferable to use 70 per cent. alcohol for this purpose.

The spirochete is Gram-negative, but stains with the ordinary dyes; with the Giemsa stain it takes a bluish red. These organisms are best seen with the darkground illuminator. They average from 6 to 30 microns in length and about 0.2 micron in width. The windings are not acute and the ends of the organism terminate in the center of the spiral. The motion of the organisms is very rapid; they travel from place to place, resembling small snakes; they have a rotary motion, but this is not so pronounced as the backward and forward motion.

After unsuccessful attempts at animal inoculation with cultures, Scherber[5] does not believe in the pathogenicity of the fusiform bacillus and considers the spirochete responsible for the lesions.

A rapid and simple method of collecting the pus is by capillary attraction with small capillary pipets. These may be pushed deep into the ulcers and a quantity of fresh discharge obtained. The pus may be examined with the dark-field illuminator, or fixed and dried and stained from two to three minutes with carbolfuchsin. It is to be examined without cover-glass with oil immersion (the method used in Figure 2).

PATHOLOGY

The pathologic condition in the milder forms of balanitis erosiva circinata consists simply of a flaking off of the epithelium, leaving small superficial erosions. When the desquamation is more marked there are bright-red ulcers, which are surrounded by a small white zone, the remains of the necrotic epithelium.

In the surrounding tissue there is an exudation of leukocytes and plasma. The organisms are found in the necrotic membrane. At times they can be demonstrated in the tissues and blood-vessels, as shown by Scherber and Müller.

In the more severe grades of infection there is more venous stasis and more exudation, resulting in marked phimosis which predisposes to gangrene. As Scherber and Müller[2] pointed out, the whole condition is one of degree only, but for clinical purposes we may distinguish two types: (1) balanitis erosiva circinata and (2) balanitis gangraenosa.

SYMPTOMS

Balanitis erosiva circinata commences with the appearance of one or more small grayish-white patches in the preputial sac. At the time of the development of the erosion an offensive thin pus is produced, of a characteristic stinking odor and of the usual yellowish-white; in the more severe cases it becomes grayish-white or grayish-brown.

Pus from lesions is innocuous.[3] In its development the inoculation never becomes pustular, but necrosis of the epithelium always represents the beginning, and the future process is polycyclic.

Infection shows a preference for the sulcus coronarius, next on the inside of the prepuce and last on the glans. In development all of the glans penis is affected and under favorable anaerobic conditions the whole fossa navicularis is affected. It must be borne in mind that more or less phimosis is an essential factor.

In the mild cases the foreskin may be easily retracted, but in the more severe forms marked phimosis develops; there is considerable itching and burning behind the glans; the act of urination is practically without pain. In contradistinction to the gangrenous form in this type of the disease, constitutional symptoms are slight or absent.

As the process follows no hard and fast lines, there are certain deviations from the foregoing picture. The process may be limited to the glans and the inner surface of the foreskin may be unaffected. This may be extreme or mild, but is always present on the covered portions of the glans.

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[10] Weaver and Tunnicliff: Jour. Infect. Dis., 1905, No. 2, p. 446.
[11] Tunnicliff: Jour. Infect. Dis., 1906, iii, 148.
[12] Tunnicliff: Jour. Infect. Dis., 1911, viii, 316.
[13] Ellerman: Centralbl. f. Bacteriol., 1905, xxxviii, 383.

The inflammatory condition may remain a purely erosive superficial process and may recover spontaneously. Berdal says that in simple cases healing takes place in four or five days. Scherber has seen spontaneous healing almost completed in forty-eight hours by simple washing and admission of air by retracting the foreskin. He further states from observation that the height of the development usually occurs in from four to eight days after exposure to infection, and that he seldom saw cases of four weeks' incubation and cases persisting for three or four weeks.

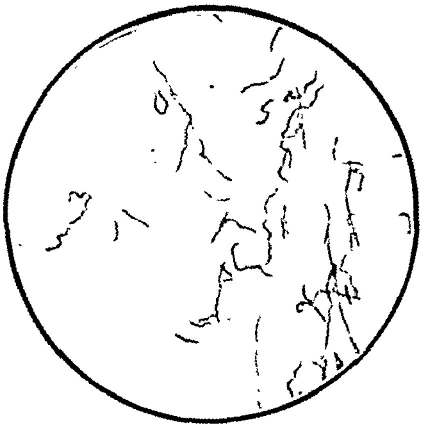
Fig. 1.—Vibrio and spirochete: culture from case of noma. Slide and culture by Dr. Ruth Tunnicliff.

In a number of cases the process does not remain superficial, but develops deep diphtheritic and gangrenous ulcers, which complicate the clinical picture in many ways.

In some cases when the foreskin can be retracted, after removal of the pus, small, round ulcers can be seen inside of the erosions, varying in size from that of a pinhead to that of a pea. These ulcers are moderately deep and on the whole flat and surrounded by a red zone. They are covered by a closely adherent pseudomembrane. In other cases the ulcers are more extensive and deeper, the average size being about that of a dime. These may become confluent and extend over the whole surface of the sulcus or the inner surface of the foreskin.

These balanitic ulcers are of a somewhat irregular outline and are surrounded by a small inflammatory, slightly elevated border. This border is clean-cut and the sides somewhat slanting; the base is uneven, with a firm yellowish-white or yellowish-brown membrane, which is often edematous and swollen.

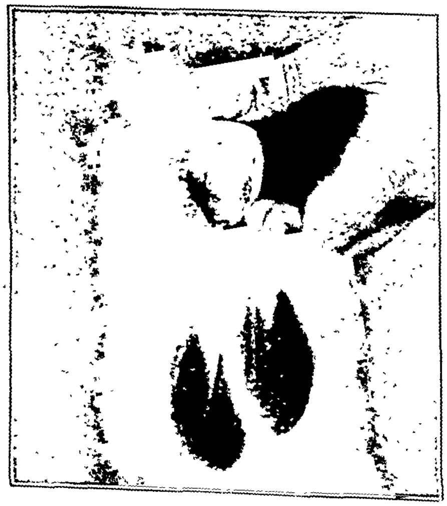
Fig. 3.—Erosive type, Case 1. Balanitis erosiva; foreskin not retracted; ulcers seen on margin.

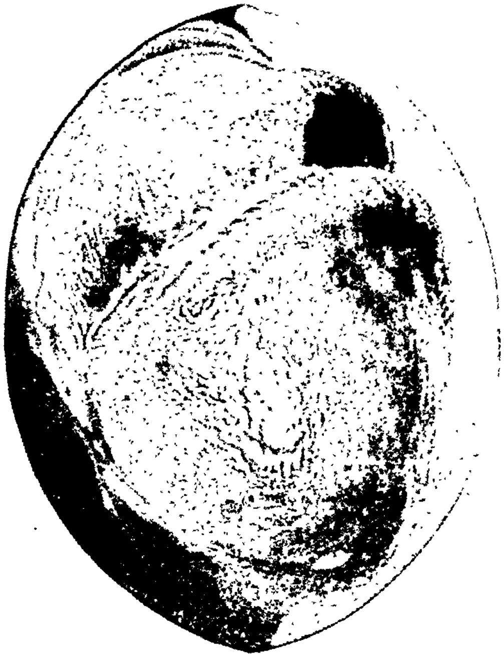
Fig. 4.—Erosive type, complicated by syphilitic infection, Case 2. Foreskin retracted; grayish purulent secretion in sulcus coronarius and a few small erosions on the glans.

When more edematous this false membrane appears as a sort of friable slime. Here and there may be hemorrhagic spots which sometimes give rise to hemorrhages from the base of the ulcer.

In the severe forms the constitutional symptoms are more marked. Scherber and Müller noticed chills and fever in a majority of their cases and at the onset vomiting. The average temperature ranges from 100 to 101 F. There is marked edema, the external skin being red and edematous; the infiltration may extend to the root of the penis in some cases. The dorsal lymph-cord is usually palpable and the inguinal nodes are enlarged, but not painful. Unless the phimosis is complete there is no pain on urination; when, however, the urine is not able to pass freely and dilates the preputial sac, there is considerable pain.

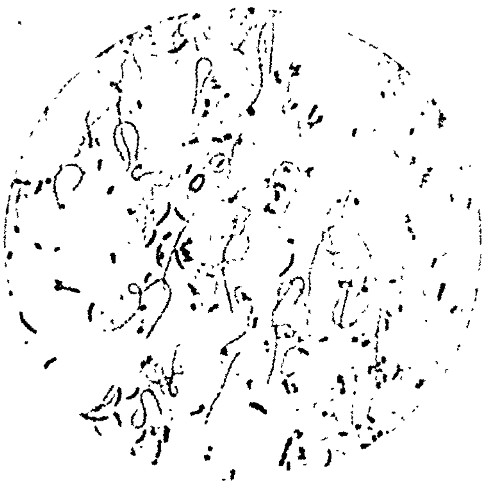
Fig. 2.—Etiologic factors in erosive and gangrenous balanitis.

The discharge is the most profuse in this type of the disease. By gently irrigating the preputial sac with sterile water and wiping the external urethral orifice we can easily exclude gonorrhea by having the patient urinate in two glasses.

In the majority of cases of balanitis gangraenosa there occurs a marked edema of the subcutaneous tissue of the penis which extends to the root and causes a marked phimosis. If the ulcer is situated on the inner surface of the foreskin it shows externally as a dark, bluish-red area within the surrounding bright-red inflammatory tissue. The congestion and abnormal pressure, due to edema, favor the progress of the disease.

Soon the foreskin over the ulcer becomes black, and a complete necrosis of the part occurs. If the ulcer is situated on the glans, in a short time it may produce complete destruction of the glans or may even cause an extremely rapid gangrene of the organ, which may extend even to the root of the penis, as may be seen by my fourth case.

glans and the inner leaf of the foreskin were covered with small ulcers, having necrotic sloughing bases. Those on the inner leaf extended to the border of the preputial fold; by gently pulling back the foreskin the whole could be plainly seen. The dorsal lymph-cord could be plainly felt and the inguinal nodes were enlarged but not tender. There were no constitutional symptoms.

Treatment.—The patient was given a wash of hydrogen peroxid, full strength. As he did not return to the clinic, we presume that his condition was satisfactory.

Case 6.—Gangrenous type, previously reported.[1]

History.—The patient, A. G. G., aged 43, denied all previous venereal history. He had had intercourse nine days previously, at this time, the patient said that the prostitute lubricated the labia with saliva. The following day the glans-portion began to swell; there were chilly sensations; no nausea or vomiting. Previous to this time the patient's glans penis was exposed between the preputial fold, and the foreskin could be retracted. On account of the rapid phimosis that developed this could not be accomplished later. The local symptoms increased rapidly; by the third day gangrene had set in.

Examination.—When the patient presented himself at the clinic he was well nourished; musculuar development good. There was a slight septic intoxication. The entire preputial covering for a distance of 3 inches was one black, necrotic mass (Fig. 6). By gentle manipulation the necrotic mass could be drawn away and deep sloughing ulcers, with sharp borders, could be seen extending into the penis above the glans. There was considerable thin, slimy pus present, with an odor of necrotic tissue. Here we were able to find the organism in large numbers. The remaining portion of the penis was dark red and infiltrated, the edema extending to the root; the inguinal lymph-nodes were enlarged. The patient's temperature was 102; malaise was marked.

Treatment.—The patient was sent to the county hospital. Here the necrotic foreskin was cut away, and just above the glans-portion, at the site of the inner preputial fold, two deep ulcers could be seen. The glans-portion was necrotic. In forty-eight hours (Fig 7) the entire glans-portion, together with about 1½ inches of the shaft of the penis sloughed off, leaving a short stump (Fig. 8). The patient was treated with irrigations of potassium permanganate three times a day, but the organism had already invaded the deeper layers and gangrene was unavoidable.

In the summer of 1912 I was permitted to exhibit in my clinic, from Dr. Sullivan's service at the Post-Graduate Hospital, an extensive case of gangrenous balanitis with destruction of one-half of the shaft of the penis. This had previously been treated with aseptic dressings and no organisms were found at the time I saw the patient.

At the present writing there is a case of gangrenous balanitis in the service of Dr. Oliver Ormsby at the Cook County Hospital.

Since reading Scherber's last publication, I am positively convinced that the same condition may produce distinct pathologic lesions in the female. Only recently I had under observation a patient with distinct erosions on the inner border of the labia minora with profuse foul-smelling acrid discharge.

I was able to find only the vibrio, but prompt and permanent healing was effected by means of tampons applied daily of 2 per cent. hydrogen peroxid.

It must be borne in mind that erosive and gangrenous balanitis only represents different stages of development in the same infection and that prompt treatment may often save an unfortunate person from the destruction of the whole or part of the sexual organ.

32 North State Street.

THE DIAGNOSIS AND TREATMENT OF SEBORRHEIC KERATOSES OF THE LIPS

RICHARD L. SUTTON, M.D.

KANSAS CITY, MO.

The subject of seborrhea of the lip and its relationship to epithelioma has been admirably covered in a recent paper by Montgomery[1] of San Francisco, who also calls attention to the fact that concomitant functional hepatic embarrassment, chronic indigestion and the long-continued use of certain articles of food, particularly those rich in milk-fat, all have a deleterious influence on the skins of persons who are naturally predisposed to seborrhea.

The diseases commonly affecting the lips are relatively few in number. If one excludes lupus vulgaris and lupus erythematosus, both of which are comparatively rare in this region, at any rate in America, only six or seven disorders remain to be considered. Of these, pseudocolloid of the lips (Fordyce's disease), cheilitis glandularis apostematosa, cheilitis exfoliativa (Stelwagon's disease), seborrheic keratosis and epithelioma are the ones most frequently encountered. Of the general infections, syphilis is the most important.

Fordyce's[2] disease is "a condition which is characterized by the appearance of whitish or yellowish, scanty or abundant, discrete, aggregated, and often practically coalescent milium-like bodies, occurring more especially on the inside of the mouth, laterally along the line of the teeth as far back as the last molar, and possibly somewhat less frequently on the vermilion or mucous and inner surface of the lips."[3] The disorder is harmless, gives rise to no subjective symptoms, and does not predispose to malignance; consequently its presence is rather of theoretical than of practical interest.

Cheilitis glandularis apostematosa, an affection first described by Volkmann[4] in 1870, is an adenomatous condition of the mucous glands of one or both lips, histologically distinguished by enormous dilatation and hypertrophy of the ducts, and a great increase in the amount of glandular tissue, and clinically characterized by the presence of the widely dilated orifices of the affected glands on the mucous surface of the lip, giving to the vermilion border a peculiar, sieve-like appearance.

Until quite recently the condition was thought to be an extremely rare one, but, like many other cutaneous disorders, it undoubtedly occurs much oftener than it is recognized. Aside from the slight deformity to which its presence may give rise, and the inconvenience experienced by the patient in getting rid of the copious mucous discharge which is usually present, the condition in itself is not a serious one. In a single instance—and I have examined fully a score of cases—there was a concomitant cancerous growth at the mucocutaneous juncture, near the corner of the mouth. The patient, a man under the care of my associate, Dr. Kanoky, had been troubled with seborrhea for many years, and the border of the lower lip presented not only a well-defined case of cheilitis glandularis apostematosa (two daughters also were affected with this disorder), but cheilitis exfoliativa

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1. Montgomery, D. W.: Seborrhea of the Lower Lip and Its Relationship to Epithelioma, Jour. Cutan. Dis., February, 1913, p. 82. See also Montgomery, D. W., and Culver, G. D.: Influence of Milk-Fat on Skin, Jour. Cutan. Dis., June, 1912, p. 319.

2. Fordyce, J. A.: A Peculiar Affection of the Mucous Membrane of the Lips and Oral Cavity, Jour. Cutan. Dis., 1896, xiv, 413.

3. Stelwagon, H. W.: Diseases of the Skin, Philadelphia, 1910, p. 1164.

4. Volkmann: Virchows Arch. f. path. Anat., 1870, l, 142.

and a "degenerated" seborrheic keratosis as well. It is probable, however, that the epithelioma was a result of the seborrheic affection and not of the glandular one.

Cheilitis exfoliativa[5] is a chronic, low-grade inflammatory process involving the vermilion border and usually the contiguous mucous and cutaneous surfaces of one or both lips, with resulting gradual exfoliation of the superficial corneous layers. There is seldom if ever any visible liquid exudation, and there is no itching. Clinically and histologically the disorder resembles a localized seborrheic dermatitis.

Seborrheic keratoses are circumscribed, painless, brown-pigmented, warty growths which develop on senile skin or on skin which is undergoing changes similar to those occurring in old age. The lesions begin as brownish macules and develop quite slowly. In the course of a few months or years a roughened, scaly, brownish or yellowish plaque is formed, with a slightly infiltrated base. In the milder types the elevation is slight, and the fawn-colored epithelial covering is smooth and velvety to the touch. In the extreme cases, however, the firm, dry, horny scales are irregularly arranged over the surface of the lesion, giving to it an appearance almost verrucose. The plaques are oval or irregular in outline and vary in size from a tack-head to a silver quarter. The sites where these lesions occur most frequently are the face and the back, although other regions are occasionally affected. When occurring on the lip, the lesions are usually firmer, smoother and more horn-like than when they occur on other parts of the body, but the main clinical and histologic features are the same. Here as elsewhere the growths may be temporarily removed by the use of greasy applications, alone or combined with small percentages of salicylic acid or sulphur, but promptly recur unless the large capillary loops which supply the base of the lesion are obstructed or obliterated. If allowed to persist, a considerable proportion of seborrheic keratoses undergo degenerative changes and ultimately become malignant, the resulting epitheliomas commonly being of an indolent, slow-growing type.

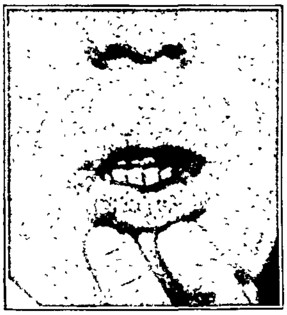
Fig. 1.—A typical example of cheilitis glandularis apostematosa. The scar marks the site of a former sinus opening.

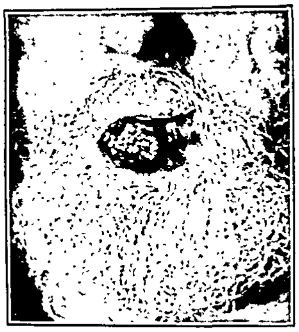
Fig. 2.—Advanced papillary epithelioma of lip which developed on the base of a former seborrheic keratosis. Inoperable.

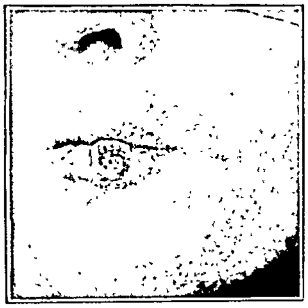
Fig. 3.—Chancre of lower lip, four weeks' duration.

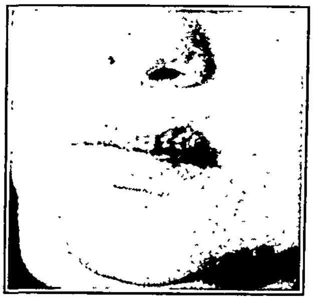
Fig. 4.—Chancre of upper lip, seven weeks' duration.

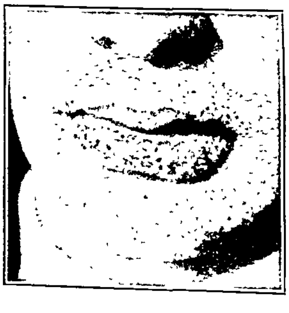
Fig. 5.—Cheilitis due to syphilis in the second stage. Corners of mouth fissured, numerous mucous lesions in buccal cavity.

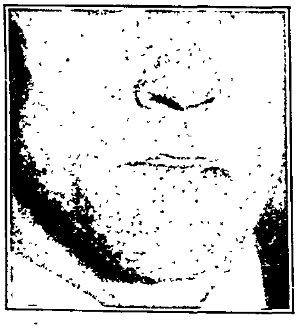
Fig. 6.—Seborrheic keratosis of the lip, three years' duration. Cured by application of Roentgen rays and carbon dioxid snow (Case 1).

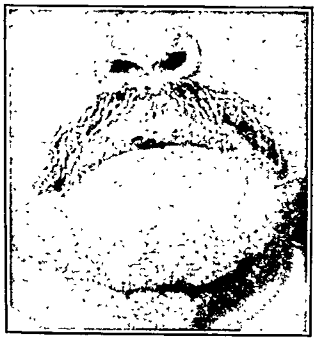
Fig. 7.—Seborrheic keratosis of the lip, seven years' duration (Case 2).

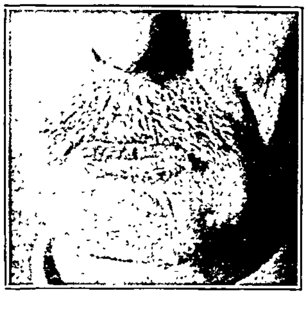
Fig. 8.—Seborrheic keratosis of the lip, ten years' duration. Cured by application of Roentgen rays and carbon dioxid snow (Case 3).

The diagnosis of cancer of the lip, unless it be at an extremely early stage, is as a rule not difficult. Occurring in middle-aged or elderly persons, and frequently commencing as a slight abrasion or crack, in the course of a few weeks or months a small, tender, superficial ulcer with variable infiltration results. The surface of the lesion is reddish or granular, and covered with a thin layer of viscid mucus.

Occasionally the epithelioma is of the papillary variety, beginning primarily as a papillary or warty growth, or springing secondarily from a lesion of the superficial, abraded type. The resulting fissured, cauliflower-like mass is generally covered with a sticky, mucoid or purulent discharge, bleeds easily, and gives rise to considerable infiltration and swelling of the subjacent tissues. In both varieties the lymph-nodes are involved comparatively early, particularly if the lower lip is the one affected.

According to Pusey[6] statistics would indicate that the majority of cancers of the upper lip are of the rodent ulcer type, while only about 1.5 or 2 per cent. of those occurring on the lower lip are basocellular. In Bloodgood's[7] series of 119 cases, less than 4 per cent of those developing on the lower lip were rodent ulcers. I have found it difficult to obtain pathologic material in these cases because of the patients' fear of the knife and cutaneous punch, but, judging from the clinical features, I should say that basocellular carcinoma attacks the lower lip more frequently than this. I realize, however, that an opinion based on macroscopic appearance alone has very little weight when opposed to such evidence as that presented by Bloodgood.

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[5] Stelwagon, H. W.: Jour. Cutan. Dis., 1900, p. 268; A Peculiar Eczematoid Eruption of the Lip Region, ibid., August, 1904, p. 351.

[6] Pusey, W. A.: Epithelioma of the Lip, Jour. Cutan. Dis., February, 1913, p. 73.

In epitheliomatosis of this region the lower lip is affected much oftener than the upper. Bloodgood's conclusions were based on the study of 106 lesions of the lower lip and 13 of the upper, and Borrmann's[8] on 74 of the lower and 6 of the upper.

The only condition due to syphilis that might be mistaken for a seborrheic keratosis is the chancre. The rapidity with which the luetic lesion develops, as well as the induration generally present, and the associated early involvement of the lymph-nodes, will usually serve to distinguish it. In passing, a word of warning regarding the snap-shot diagnosis of suspicious lesions in the buccal region by means of the microscope may not be out of place. When a man of Noguchi's[9] experience expresses doubt regarding his ability to identify positively the *Spirochaeta pallida* in specimens taken from the mouth, it would be well for less skilled laboratory workers to practice conservatism. The following cases of seborrheic keratosis of the lip have been under my care at various times during the past three years:

REPORT OF CASES

CASE 1.—J. G., male, married, farmer, aged 28, referred by Dr. E. E. Peterson of Nashua, Mo. The patient's health had always been fairly good, although he had been troubled with seborrhea of the face and scalp since his sixteenth year. He seldom drank milk, and ate butter sparingly, but was an inveterate chewer of tobacco. His teeth were in bad condition. The lesion on the lip was of three years' duration, and, the patient believed, had followed a slight injury. Only the left side of the lower lip was involved, and the growth was but slightly infiltrated. It cleared up promptly under treatment.

CASE 2.—I. G., male, married, banker, aged 59, referred by Dr. W. L. M. Witter of Milan, Mo. At various times during the preceding fifteen years the patient had suffered more or less from digestive disturbances, and particularly from catarrhal jaundice. Nearly all of his teeth had decayed, and had been removed and replaced by bridgework. He was a large, powerful man, and careless regarding both eating and drinking. He had used tobacco since boyhood. There were numerous seborrheic keratoses on the cheeks, forehead, nose and backs of both hands. The one which he desired removed was on the upper lip, near the right angle of the mouth, and had been present about seven years. The plaque promptly disappeared under treatment, but in the course of a few months a new one developed on an adjoining area. This one was also removed, but was likewise followed by a recurrence. During the past three years, a half dozen or more keratoses have been removed from the right side of the upper lip, but, despite most energetic treatment, new ones have invariably appeared. The degree of infiltration is very slight, and there has never been any ulceration or involvement of the lymph-nodes. The sites of the former lesions are at first smooth and burnished looking, but sooner or later the surface becomes rough and scaly, and a new lesion promptly develops unless treatment is instituted.

Naturally, the patient fears that a carcinoma will finally result, but as yet there is nothing to indicate it. In this case, as in Montgomery's first one, I feel quite sure that the disordered condition of the digestive tract has much to do with the recurrence of the growths.

CASE 3.—W. F., male, married, farmer, aged 47. This patient had had seborrhea of the face and scalp for many years. He had been a chewer of tobacco for over twenty years. His teeth began to decay early in life, and only a few sound ones remained. The lesion from which relief was sought occupied the middle two-thirds of the lower lip, and was about 1 cm. in width and 0.5 cm. in height. It had commenced as a purplish macule, ten years previously. At times practically all of the horny mass would become detached, leaving a rough verrucose base, but in the course of a few weeks the keratosis invariably returned. Under treatment recovery was prompt, and there was no sign of a recurrence when the patient was last seen, eleven months later.

CASE 4.—F. R. N., widower, retired farmer, aged 61, referred by Dr. V. L. Andrews of Stella, Neb. In this case the keratosis, which had been present for five years, was situated on the left side of the lower lip, and was almost a duplicate of the lesion in Case 1. This patient had worn artificial teeth for eleven years, and had smoked and chewed tobacco for more than thirty. There was a history of "dyspepsia" and "liver trouble" extending over nearly a quarter of a century. The lesion cleared up promptly under treatment, but there was a slight recurrence two months later. Since then the lip has been in good condition.

CASE 5.—J. R., cattleman, married, aged 41, referred by Dr. Daniel Ross of Denison, Tex. The keratosis was decidedly

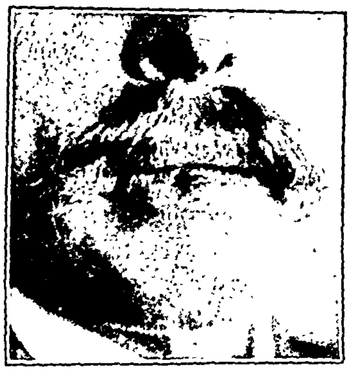

Fig. 9.—Seborrheic keratosis of the lip of about one year's duration (Case 5).

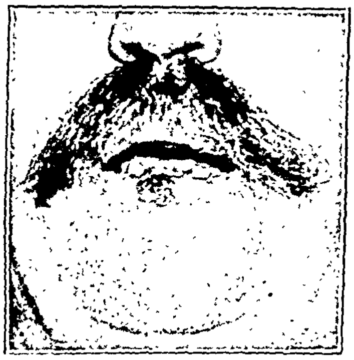

Fig. 10.—Superficial epithelioma of lip which developed on the base of a former seborrheic keratosis. Apparent cure following application of Roentgen rays and carbon dioxid snow (Case 6).

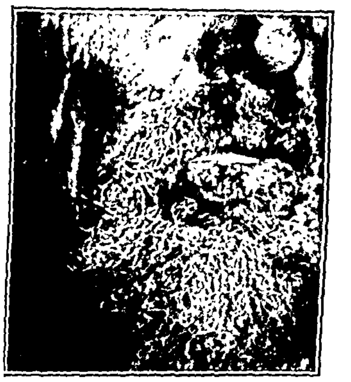

Fig. 11.—Epithelioma of lip which developed on the base of a seborrheic keratosis of fourteen years' duration (Case 7).

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7. Bloodgood, J. C.: The Surgical Treatment of Cutaneous Malignant Growths, THE JOURNAL A. M. A., Nov. 5, 1910, p. 1615.

8. Borrmann: Deutsch. Ztschr. f. Chir., 1905, lxxvi, 404.

9. Noguchi, H.: Identification of Spirochaeta pallida in Culture THE JOURNAL A. M. A., Oct. 5, 1912, p. 1236.

warty in character, the hypertrophied papillae bleeding profusely whenever the growth was curetted away. It was located at the mucocutaneous juncture, near the middle of the lower lip. There was but little infiltration, and no suggestion of epitheliomatosis. Recovery was fairly prompt under the usual line of treatment, and there had been no recurrence up to the time of the patient's death, from intestinal obstruction, almost a year later.

CASE 6.—G. W., engineer, married, aged 46, referred by Dr. T. J. Beattie of Kansas City, Mo. The patient was a large, fleshy German. His teeth were in very bad condition, the result of a long-standing case of pyorrhea alveolaris. He had used tobacco since boyhood. The lesion, which had commenced as a seborrheic keratosis five years before, was located near the middle of the lower lip, and was already epitheliomatous, as shown by the amount of infiltration present, and the ulcerated base of the growth. Recovery was apparently complete at the end of two months' treatment, and there are no signs of recurrence after more than a year has passed.

CASE 7.—L. J. B., retired farmer, married, aged 64, referred by Dr. Frank Herbst of Kansas City, Mo. The lesion on the lip had commenced as a seborrheic keratosis fourteen years previously. At the time of the first examination there was present a large keratosis at the mucocutaneous juncture on the right side of the lower lip. When the surplus epithelium was removed by means of a mild salicylic acid paste, the base was found to consist of an ulcerated, nodular mass, the size of an English walnut. The submaxillary lymph-nodes were not palpable. This patient had been in poor health for many years, and had been a tobacco-chewer since his thirtieth year. The growth did not respond favorably, or at any rate promptly, to treatment, and at the end of a month was referred to Dr. Jabez N. Jackson for operation.

TREATMENT

The line of treatment employed in these cases was in each instance the same, with the exception of Case 2. Each of the lesions received from seven to twenty Roentgen-ray exposures, a medium tube being used, at a distance of 15 cm. The treatments were of eight minutes' duration, and were repeated daily for one week. Finally the superabundant epithelium was removed by the aid of a 5 per cent. salicylic acid ointment, and the base of the lesion thoroughly frozen (for at least one minute, under heavy pressure) with Pusey's[10] carbon dioxid snow, care being taken to include not only the entire base but a margin of apparently healthy integument as well.

In Cases 1, 3, 4, 5 and 6 the results were all that could be desired. In Case 2 a large number of remedies and measures have been tried. Probably the greatest degree of benefit has resulted from the application of trichloracetic acid crystals, an exceedingly effectual agent first suggested by Davis of Philadelphia, and strongly recommended by Montgomery and Culver[11] for the removal of circumscribed patches of chronic seborrheic dermatitis. Despite the efforts of both Dr Witter and myself, however, the keratoses continue to form.[12] It is possible that the plan of treatment here outlined would have ultimately brought about a cure in Case 7, but under the circumstances I believe that the necessary delay would not have been justified.

CAUSES OF SEBORRHEIC KERATOSES

According to Pusey[13] the most essential factor in the production of seborrheic keratoses is a peculiar harsh, dry quality of the skin, occurring more particularly in florid individuals. The fact that several members of a family may be similarly affected would suggest that this condition, like icthyosis, may occasionally be hereditary. Constant exposure to sunlight and wind is a contributory cause in many instances. In keratosis of the lip, however, it is exceedingly probable that neglect of the teeth, with ensuing disturbances of the digestive tract, and the irritation resulting from the long-continued use of tobacco, especially chewing tobacco, are important etiologic factors.

709 Carbin Terrace.

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[10] Pusey, W. A.: Carbon Dioxid Snow in Treatment of Nevi and other Skin Lesions, THE JOURNAL A. M. A., Oct. 19, 1907, p. 1354.

[11] Montgomery, D. W., and Culver, G. D.: Trichloracetic Acid as a Keratolytic in Seborrheic Keratosis, Jour. Cutan. Dis., September, 1912, p. 523.

[12] April 19, 1913. Early in February this patient, who is an exceedingly intelligent, but rather "strong-minded" individual, concluded that he would reform in the matter of drinking and intemperate eating. Within less than a month the lip was well, and has remained so ever since. The credit for this gratifying result belongs to Dr. Witter, who supplied the necessary moral support.

[13] Pusey, W. A.: The Principles and Practice of Dermatology, Ed. 2, 1911, p. 737.

THE EFFECTS OF ADRENAL MASSAGE ON BLOOD-PRESSURE

R. G. HOSKINS, PH.D.
Professor of Physiology, Starling-Ohio Medical College
AND
CLAYTON McPEEK, M.D.
Lecturer in Physiology, Starling-Ohio Medical College
COLUMBUS, OHIO

In spite of considerable evidence to the contrary, the opinion widely prevails that adrenal secretion has exclusively a pressor effect on vascular tension. From time to time since Oliver and Schaefer first investigated the subject, different observers have reported that dilute solutions of adrenal extract cause a fall of arterial pressure; but this effect has been ascribed to general "depressants" which occur in almost any tissue extract. For instance, Moore and Purington reported in *1900 that* extracts of adrenal glands from the ox when given in minute dosage cause in the dog a fall of pressure, but that when larger amounts are used the effect is a rise.[1]

More recently Elliott[2] has noted that stimulation of the splanchnic nerves in the cat results not only in augmented pressure due to vasoconstriction in the abdominal viscera, but also in a secondary fall of pressure due to liberation of epinephrin from the adrenals. This fall of pressure Elliott has designated the "paradoxical reaction." A similar effect was independently observed by Cannon and Nice.[3] Recently, continuing investigations along the same line, Cannon and Lyman[4] have conclusively proved that in the cat at least, when blood-pressure is at a normal height, injections of pure epinephrin in proper minute dosage and at the proper rate invariably produce a depression. This effect can be secured time after time. It was found, however, that the reaction varies diametrically depending on the existing degree of vascular tonus. If initial tension is low only an augmented pressure can be secured. Last year Hoskins and McClure[5] reported that in the dog also the effect of minute doses of epinephrin (adrenalin) is characteristically a fall of pressure; then as the dosage is increased the depressor is succeeded by a pressor effect. These observations, however, are open to the objections that the depressor influence might conceivably be due to the preservative used in the drug, to impurities present or to disintegration products.

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[1] For a review of the earlier literature see Vincent, Internal Secretion and the Ductless Glands, London, 1912.

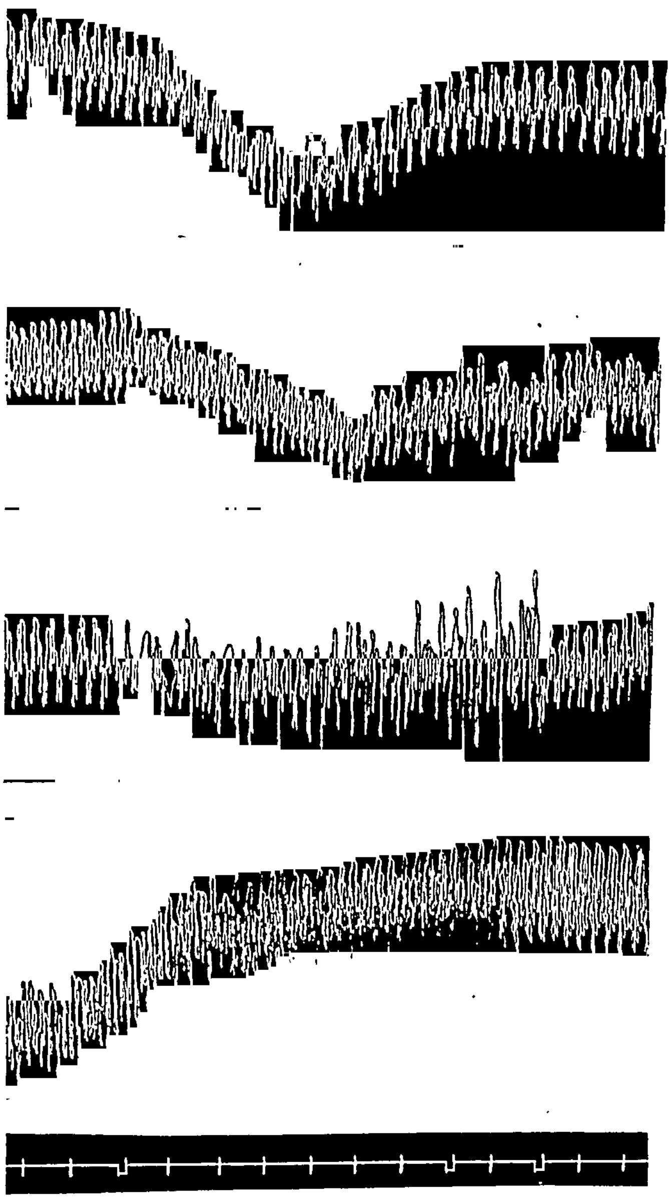
[2] Elliott: Jour. Physiol., 1912, xliv, 374.

[3] Cannon and Nice: Am. Jour. Physiol., 1912, xxix, p. xxiv.

[4] Cannon and Lyman: Am. Jour. Physiol., 1912, xxxi, 376.

[5] Hoskins, R. G., and McClure, C. W.: The Adrenal Glands and Blood-Pressure, Arch. Int. Med. October, 1912, p. 353.

The question as to whether minute quantities of epinephrin do or do not have a pressor effect is one of considerable importance. The assumption that epinephrin circulating even in minute (physiologic) quantities does have a pressor influence is the basis of a widely held theory that an important function of the adrenals is to maintain a tonic activity in the vasomotor system, or, indeed, in the sympathetic system as a whole. So far as the cat is concerned the matter is now conclusively determined. Similarly conclusive evidence should be obtained as regards other animals. Von Anrep[6] has recently made some interesting observations on the effects of stimulating the splanchnic nerves in the dog. He noted that such stimulation causes a discharge of epinephrin which can be recognized by its constricting effect in the peripheral blood-vessels. Although he was familiar with Elliott's "paradoxical reaction" in the cat he apparently saw nothing comparable to it in the dog.


Graduated series of effects obtained in the same dog by adrenal massage of varying degrees from light (top) to vigorous (bottom). Tracings from carotid artery. Mean blood-pressure 130 mm. Time, five seconds.

For these reasons we decided to investigate further in the dog the vascular reactions to adrenal stimulation, noting particularly the effects of varying the strength of stimulus. Our first plan was to apply electrodes to the splanchnic nerves directly after cutting them to prevent the effects of afferent impulses playing on the central nervous system. Our first results were unsatisfactory, apparently because there was little dischargeable epinephrin left in the glands after the necessary experimental manipulations. In the meanwhile Cannon and Lyman's paper appeared, showing that normal reactions could not be expected under the condition of low blood-pressure which results from cutting the splanchnic nerves.

It became necessary then to devise some way of stimulating the glands during conditions of normal pressure without at the same time unduly stimulating any of the intact contiguous nerve fibers. Stewart[7] has called attention to the fact that massage of the adrenals readily causes an augmented epinephrin secretion. We decided therefore to make use of this fact to secure adrenal discharge. Investigation showed that considerable care was necessary to avoid visceral irritation which in itself causes changes of blood-pressure. With careful manipulations, however, massage sufficient to affect the adrenals could be applied in the region of these glands without causing any significant influence on blood-pressure due to stimulating other structures. Any results from applying similar massage to the adrenals, therefore, can be ascribed to effects on the glands themselves.

As a matter of fact, another unexpected difficulty was encountered. It proved necessary to work very carefully to prevent a premature exhaustion of the available epinephrin. Influences known to be important in causing adrenal discharge are anesthesia, asphyxia, violent emotions and sensory stimulation. These all had to be reduced to a minimum to secure satisfactory results.

A dog of quiet temperament was in each instance selected. It was then handled gently and etherized with as little excitement or asphyxiation as possible. Then after it was strapped to an animal-holder, urethane was given by stomach-tube, about 2 gm. per kilogram, and the ether discontinued as the urethane became effective. A cannula was inserted into one of the carotid arteries and connected with a recording mercury manometer. An incision about 2 inches long was then made through the body wall in the region of each adrenal. Through these a finger or finger and thumb could be inserted and the adrenals carefully massaged. It was found necessary to use care to avoid traction on the mesentery or undue irritation of the viscera, either of which in themselves cause variations of blood-pressure.

The results secured confirm the observations of Hoskins and McClure on the effects of varying dosage of epinephrin. They ranged from marked depression with a small discharge to considerable rise of pressure when the glands were vigorously manipulated. In no case, however, was there secured a rise of pressure at all comparable to that following the ordinary therapeutic dosage of epinephrin or, indeed, of the magnitude expected.

The accompanying tracings show a graduated series of effects produced in the same dog by massaging one or the other of the adrenals, at first gently and then more and more vigorously until a maximal discharge was obtained. In the last instance figured the discharge continued for about four minutes after the massage had ceased.

Incidentally, it may be mentioned that we have had opportunity to extend Cannon and Lyman's observation on the effect of initial tension to include the dog. In a series of experiments starting with a mean blood-pressure of 120 mm., very dilute solutions of epinephrin gave a pronounced fall of pressure. When in the same dog, however, the initial tension was 40 mm., only purely pressor effects could be obtained.

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[6] Von Anrep: Jour. Physiol., 1912, xlv, 318.

[7] Stewart: Jour. Exper. Med., 1912, xv, 547.

The results herein reported as well as those of Cannon and Lyman add further support to the conclusion that adrenal secretion cannot be an immediate factor in normal blood-pressure. There can be little doubt that the injection or discharge of epinephrin in gradually increasing amounts will result first in an augmentation of any physiologic effect that normally circulating epinephrin might be producing. It follows, therefore, that since the first effect of such injection is depression the adrenals have normally either no immediate influence or else have a depressor effect on arterial tension. It is only when a distinctly abnormal quantity is used that a hypertension occurs. Strong support for the same conclusion is also derived from the fact reported by Hoskins and McClure[8] in 1912, that epinephrin injections bring intestinal peristalsis to a complete standstill in dosages inadequate to raise blood-pressure. A mechanism that could promote vascular tension only at the expense of intestinal stasis would be obviously futile.

An explanation of the well-known low blood-pressure that results in experimental adrenal deficiency or in melasma suprarenale (Addison's disease) is to be looked for, therefore, not in the failure of a normal tonic stimulant to the sympathetic nervous system, but probably in an interference with muscular metabolisms, including those of the heart and arteries.

700 North Park Street.

THE POSSIBLE RELATIONSHIP OF ORGANIC DISEASES OF THE NERVOUS SYSTEM TO RIGGS' DISEASE *

JOSEPH COLLINS, M.D.
Physician to the Neurological Institute of New York
NEW YORK

The occurrence of purulent disease of the alveolar processes is so common and so wide-spread that it has come to be regarded, unfortunately, only as disagreeable and esthetically offensive, but not dangerous and capable of causing serious disease. I have had experience which convinces me that Riggs' disease may be the source from which serious organic diseases of the nervous system flow; although I can offer no other proof of the truth of this statement than the occurrence of such disease in persons afflicted with alveolar pyorrhea, the absence of other etiology and the amelioration or disappearance of the disorder after the pyorrhea has been treated locally and constitutionally by means of autogenous vaccine, I am constrained nevertheless to present a few of these observations for consideration. From a large number of cases in which I believe Riggs' disease played the chief rôle in the causation of the nervous trouble, I have selected three. In these the peripheral motor neurons bore the brunt of the disease.

The first case that I shall cite was one of universal myokymia. "Myokymia" is the name given to a disease of unknown origin the chief clinical manifestations of which are the occurrence of muscle waves and general weakness. It was first described by Kny[1] and by Schultze.[2] Its occurrence has been attributed to exhaustion, to exposure to cold, to trauma and to lead, but none of these has been proved to be causative of the disorder. That it is apparently a rare condition is shown by the fact that I have encountered but five instances of it in the examination of 10,000 patients. The course of the disease is extremely chronic, and in the absence of any cause which can be removed or overcome the treatment is most unsatisfactory.

Patient.—Merchant, aged 41, married, of good habits, habituated to cricket, golf and tennis, noticed in June, 1912, that his legs became tired and his gait feeble after comparatively slight effort, such as playing a round of golf or a set of tennis. These symptoms continued to increase rapidly and a month later he noticed that while playing cricket he could not focus properly; the ball would hit him instead of the bat. In the four months that intervened between the occurrence of his symptoms and the date when I first saw him, the easily induced fatigue, insecurity of station and gait and sensation of trembling in the muscles had increased to such an extent that he became nearly incapacitated for any work or pastime that required standing or walking. For instance, the day he came to see me he had to be assisted from the automobile into my house.

Examination.—The most conspicuous symptoms were: (1) constant wave-like movement in practically all the muscles of the body and of the limbs; (2) abnormal liveliness of all the tendon-jerks, including an exhaustible ankle-clonus but no Babinski or Oppenheim phenomena; (3) nystagmus when the eyeballs were in forced lateral position and paresis of the right external rectus muscle; (4) hyperidrosis; (5) increase of electric excitability of the muscles of the extremities; (6) tremor of the outstretched fingers and slight transient tremor of the lips. The myotatic irritability, however, was the striking symptom. As the patient lay quietly in bed the muscle waves could be seen extending from one end of his body to the other, short waves one following another in what seemed to be indolent succession. The most careful laboratory examination of his blood, spinal fluid, urine, gastric contents and feces showed no departure from normal. During the week that these examinations and observations were being made the patient was kept in bed and at the end of that time myokymia was much less striking and the patient said he felt quite well. He returned to his business, but in a few days he returned with complaints of his infirmity. It was then that the suspicion crossed my mind that an obvious and severe pyorrhea which he had might have some relation to the disease. A culture was made from pus about the gum of the wisdom tooth and this culture revealed Gram-positive coccus in short chains and pairs; Gram-negative coccus, unidentified few.

Treatment and Results.— Vaccine, *Streptococcus viridans*, strength 1 c.c., 500 millions. First dose 1/10 c.c., 50 millions; an injection given twice a week and increased by 1/10 c.c. or 50 millions.

Jan. 24, 1913: Vaccine, *Streptococcus viridans*, strength 1 c.c., 1,000 millions. First dose 1/10 c.c. 100 millions, a reduction from the last dose of 500 millions. The injections were given twice a week, increased by 1/10 c.c., 100 millions, up to 5/10 c.c. or 500 millions, and thereafter once a week up to 1,000 millions.

Meanwhile he was sent to a dentist for local treatment.

Two months after the treatment had been instituted he felt well, the muscle waves and weakness of the legs no longer annoyed him and he went daily to his business. He was not seen then until March 18, 1913, when a call came from his place of business saying that he had been suddenly taken seriously ill. When one of my assistants reached him he was told that the patient had been in excellent health up to the morning of that day. The day before he had walked two miles because he felt like walking and he was well enough to play a game of cricket. On the morning of March 18 he noticed at

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[8] Hoskins and McClure: Am. Jour. Physiol., 1912, xxxi, 59.

* Read before the Association of American Physicians, May 6, 1913.

[1] Kny: Arch. f. Psych., xix.

[2] Schultze: Ztschr. f. Neurol., vi.

11 o'clock that his feet were heavy. Gradually his legs and thighs became heavier and by 3 o'clock he found locomotion without support impossible. During this period he felt chilly and ill. At 3 o'clock he had several uncontrollable outbursts of sobbing without experiencing any subjective emotion, sobbing which seemed to the observer quite similar to that which one sees in patients who have thalamic disease.

He was at once brought into the hospital and the physical signs were, in addition to those which he had six months before, elevation of temperature to 101, pulse 100 and inability to stand and walk unaided. Again the laboratory investigation threw no light on this inexplicable accession of symptoms. He had the last injection of vaccine on March 16, 1913. A dentist was requested to remove two front teeth and from the cavity of one of them oozed a considerable amount of pus.

March 20, the following day, the temperature was normal, patient had slept well, and said he was much better.

March 21, patient was up walking around the room, shaved himself and was able to stand on either leg without aid. No headache had followed the lumbar puncture.

March 22, patient maintained that he felt quite well. The direct myotatic irritability of the muscles was much less than three days before. Tendon-jerks were still active, no evidence of any myokymia. From that day to this the patient has gone to his business daily. There is no evidence of muscular weakness or myokymia and he seems to be well. The vaccine administration was continued.

He who will not believe that there was a definite relationship between the pyorrhea alveolaris and this most enigmatic symptom-complex to which the name "myokymia" is given must be skeptical indeed.

The second case that I shall relate is a very complicated one and to accept the statement that all the patient's ill health was dependent on disease of the buccal cavity may tax your credulity as it does mine.

Patient.—A man now 58 years old, had been singularly free from illness until his fiftieth year. Then after months of most strenuous devotion to and successful effort in an international sporting event, he was stricken with a disease which was at first supposed to be a polyneuritis, but which was found eventually to be a chronic parenchymatous myositis. After a week of malaise the patient complained of heaviness in all his extremities. Pain in the muscles of the extremities and of the trunk increased by active or passive movements and gradually he became paralyzed and helpless, practically unable to move a limb. There was no swelling of the joints and no tenderness over nerve trunks, but the swelling of the muscles in the shoulder and upper arm and the thigh could be readily made out. None of the ordinary attributable causes of general myositis, acute infection or intoxication of any kind could be determined, nor did the blood reveal evidences of eosinophilia. In the absence of any attributable cause, it was thought it must be a manifestation of the gout. The patient had never had gout nor did his arteries or kidneys show any evidence of it. At the end of a year, during which time every resource, which a man of wealth could command, was resorted to, he gradually recovered. The muscles that were the seat of this disease in its most advanced form underwent an atrophy evidently the interstitial sequela of the parenchymatous process which after a long time was counteracted by exercise.

The patient remained well for three years; then without attribution of any kind he complained of malaise, headache, lack of energy and general depression. The upper lobe of his left lung revealed a general tuberculous infiltration. Two months later he had his first hemorrhage which was followed by most profound prostration and mental depression and both the physical examination and x-ray revealed the extensiveness of the tuberculous process. Bacilli were never very numerous in his sputum. He lost about 26 pounds in weight and had an elevated temperature for two months or over, but at the end of the year he was apparently well. Again he remained well for about three years.

One evening in September, 1912, after he had returned from the races in Paris, where he had subjected himself to some emotional strain, he complained of a strange fluttering in his chest, a sensation of uneasiness and state of apprehension without cause. At the end of a week's observation the Parisian physicians made the diagnosis of auricular fibrillation and put him on a course of treatment including digalen. At the end of a month he came home. The fibrillation which he had on his return, shown by the electrocardiograms made for me by Dr. W. B. James, was absolutely typical. He had a profound attack of prostration. He was kept in bed for five weeks, during which time most benefit was obtained from the administration of digipuratum, but the evidence of the fibrillation remained very conspicuous.

Physical Examination.—Heart revealed no valvular or detectable muscular disease. It was assumed, however, that the fibrillation of the auricles must have been the direct outcome of a chronic myocarditis, probably the result of a coronary arteriosclerosis, though no evidence of arteriosclerosis could be found in any part of the body, save for a diminution of the hydrochloric acid in the gastric juice. All laboratory examinations were negative.

Treatment.—The patient was kept in bed for four weeks and given digalen, for which later digipuratum was substituted. He felt some improvement but not much. The pulse-beat and the apex-beat became synchronous, however. His condition remained profoundly neurasthenic. Every second day he complained of stiffness of the joints of the hands and elbows, occasionally of the knees, and unattributable malaise, headache and depression. He reported that he found blood occasionally on his tooth-brush. Examination revealed an extremely mild pyorrhea from which a culture was made.

Dec. 17, 1912: Vaccine, *Streptococcus viridans*, strength 1 c.c., 500 millions. First dose was 1/10 c.c., 50 millions; injection given twice a week and increased by 1/10 c.c. or 50 millions.

Jan. 24, 1913: Vaccine, *Streptococcus viridans*, strength 1 c.c., 1,000 millions. First dose 1/10 c.c., 100 millions, a reduction from the last dose of 500 millions. Injections given twice a week, increased by 1/10 c.c., 100 millions, up to 5/10 c.c. or 500 millions, and thereafter once a week up to 1,000 millions.

Feb. 26, 1913: Vaccine, *Streptococcus viridans*, strength 1 c.c., 1,625 millions. First dose 5/10 c.c., 812 millions, a reduction from the last dose of 1,000 millions. Injections given once a week and increased by 1/10 c.c., 162 millions, for five doses and followed by three doses of 1 c.c., 1,625 millions, once a week.

Results.—From the time when the evidences of the local disorder disappeared under topical treatment and he had received ten vaccinations, the patient began to improve. Now he rides, walks, plays golf in moderation and comports himself like a normal man. An electrocardiogram made a few days ago shows the fibrillation of the auricle still in existence. The relation of the disease which this man has had to Riggs' disease, I do not know; but I do know that he seems to have recovered after the Riggs' disease had been overcome. It is worthy of note that the gastric juice now contains hydrochloric acid in normal amount.

The third case that I shall relate as an example of organic disease of the nervous system following in the wake of a condition caused by purulent gingivitis is one of multiple neuritis, which made an unimpeded progress to death.

Patient.—Farmer, aged 60, complained of pain and soreness in the lower extremities, of a sensation of drawing, or tightness in the feet and legs, of enfeeblement in the lower extremities, of rapid fatigue on exercise and of general weakness. These symptoms he thought had come on two years before I saw him, that is, in the summer of 1909, but on inquiry he admitted that he had not been well for eight or ten years. It was as long ago as that when he noticed that he could not do as much work as he formerly could do, that he became fatigued easily and that he often had pain in the back. He thought this was due to a slight attack of rheumatism which he had twenty years ago. Three years before coming under observation he had had several attacks of pain over the sternum: dull, heavy, deep pain, the intensity of which increased for about an hour, then gradually wore away. It had no relation to taking food nor was it affected by antirheumatic medicines.

In May, 1911, he complained of a sensation of constriction in the bottom of feet and toes and of increased sensitiveness of the toes. When he moved the toes they felt like a rubber ball. During the summer, weakness of the feet and legs developed and he was unable to go to his farm. In the early autumn he first noticed that he could not clear the toes in walking and this increased until complete foot-drop developed. The next symptom, aside from sexual impotency, which was an early symptom, was atrophy of the lower extremities and general emaciation.

Examination.—When I saw him early in 1912, he had the typical objective symptoms of multiple neuritis, that is, tenderness over the nerve trunks, symmetrical muscular atrophy, loss of the tendon-jerks, reaction of degeneration in the affected nerves and muscles and objective sensory disturbance nonsegmental in distribution, hyperesthetic in some areas, hypesthetic in others.

Examination of the blood on various occasions showed a mild degree of secondary anemia, and with a considerable number of leukocytes, but with no increase in the number of lymphocytes. For instance, Jan. 1, 1912, the blood showed hemoglobin 89 per cent.; red blood-cells 4,882,000; white blood-cells 19,000; differential count: neutrophils 76 per cent.; eosinophils 1 per cent.; basophils none; large lymphocytes 7; small lymphocytes 12; mononuclears none; transitional 4 per cent. The red blood-cells showed a mild polychromatophilia.

The cerebrospinal fluid analysis showed negative Wassermann, positive globulin content, no cells and the cerebrospinal fluid reduced Fehling's solution. The serum Wassermann was negative.

Analysis of the stomach contents showed a decided subacidity; total 10/40, no free hydrochloric acid, normal pepsin content and no lactic acid. Gross, chemical and microscopic examination of the stools showed no abnormality. The same was true of the urine save that there was constantly an excess of indican and occasionally a trace of urobilinogen. The pulse and temperature chart shows that each day there was an elevation of temperature in the afternoon, always as high as 100 degrees mouth temperature, and here and there 100.5 to 101 degrees. The morning temperature was approximately normal. The pulse kept pace with the temperature. In the morning it averaged from 78 to 85, in the afternoon 90 to 100.

The slight febrile state and the blood-picture were the only suggestions of a possible infectious origin of the disease, but the source of this infection, a profound purulent gingivitis, was not suspected until the patient was seen again.

Treatment and Result.—During several weeks he was subjected to general restorative treatment: massage, electricity, packs, injections of strychnin, etc. He made no progress under such treatment and a dentist was then called. Many pus pockets were opened and surgical treatment of the disease begun. Unfortunately no cultures were made. The patient could not be persuaded that this had anything to do with his total incapacity and he insisted on going home, where he died six months later, the disease, it is reported by his physician, having made steady progress.

A great many cases quite as striking as these could be cited. I am of the opinion that the neuromuscular system is most vulnerable, after the joints, to the *Streptococcus viridans*. That a very considerable number of the cases of the chronic arthritides are of bacterial origin there can be, I think, little doubt. In a recent article, Dr. T. W. Hastings[3] quotes the histories of six cases of arthritis deformans of from two to fifteen years' duration which reacted to strains of *Streptococcus viridans*. From four of these cases the same organism was isolated from a tooth-socket after extraction of the tooth. Improvement resulted from injections of vaccines.

The time has apparently come when it is incumbent on us to treat seriously what has seemed to be only an offensive disorder, and to institute early measures that will prevent a systemic infection which may become far reaching and extremely serious.

37 West Fifty-Fourth Street.

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[3] Hastings, T. W.: Complement-Fixation Tests for Streptococcus, Gonococcus and other Bacteria in Infective Deforming Arthritis and Arthritis Deformans, THE JOURNAL A. M. A., April 19, 1913, p. 1208.

A SPIROCHETE ASSOCIATED WITH INFECTIONS OF THE ACCESSORY SINUSES *

RUTH TUNNICLIFF, M.D.
CHICAGO

In examining smears from the noses of patients with acute rhinitis, a spirochete, staining deeply with carbol-gentian-violet, was observed in five cases. In four of the cases it was found in connection with infections of the accessory sinuses. In the other cases no history could be obtained except that of a severe acute rhinitis. The spirochete has two or three curves, the ends being pointed and parallel to the long axis; it measures from 2½ to 5 microns in length and ½ micron in width; it is anaerobic and was isolated in pure culture on alkaline goat-blood agar. The growth appeared on the surface after seven days incubation as a dull radiating growth; later it appeared also in the fluid of condensation.

In subcultures it formed raised pin-point colonies near the fluid of condensation, the rest of the growth being dull and rather profuse. The growth in the first culture was mucoid but it lost this characteristic after being transplanted several times. There was no odor from the cultures. The organism also grew in ascites and dextrose agar but produced no change in the mediums. In cultures the organisms may show as many as four curves and are apt to be irregular in shape, often staining irregularly. Oval, round, only slightly curved bacillary forms are seen. Deeply staining bodies and rings may be attached to the ends, and with the Giemsa stain two or three red-stained bodies are brought out inside the spirochete. The spirochetes show evidence of transverse division. The organism is commonly motile, having a darting-forward movement and some rotary motion; the refractile bodies present are also actively motile. It possesses many flagella on its ends and sides; the free round bodies also appear to possess flagella. After growing about seven days the spirochete disintegrates suddenly, leaving many poorly stained bodies as a result. It is not pathogenic when injected into the nose of a dog.

The significance of this spirochete is yet to be determined.

1743 West Harrison Street.

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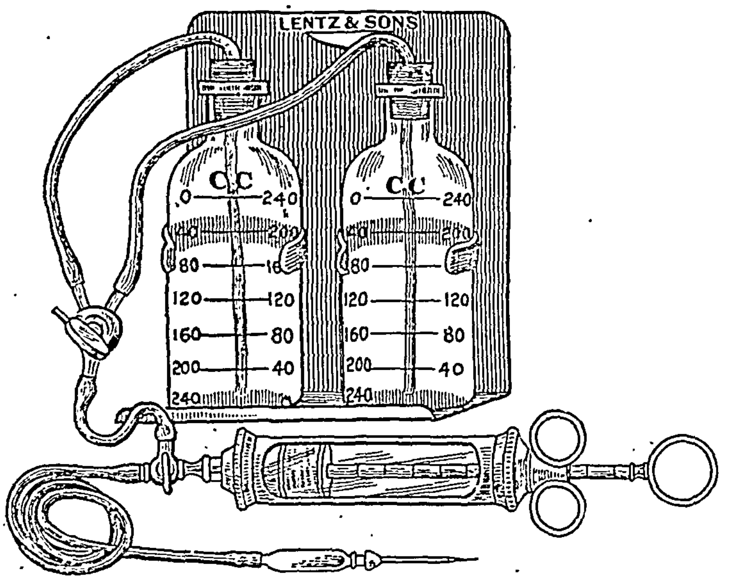
* A Preliminary Report from the Memorial Institute for Infectious Diseases.

Degeneracy and Errors of Refraction.—While extreme moral degeneracy traceable to errors of refraction is without question very rare, we have all met numerous instances in which a child's irritability, perverseness and apparently pure "cussedness" have been set aside by the wearing of glasses. A boy with squint will find his deformity the object of the taunts and ridicule of his schoolmates, and according to his temperament it will tend either to make him shy and sensitive or, if he be aggressive, resentful and pugnacious. The effect of such a defect on a girl is almost certain to make her shy and irresponsive, and may profoundly influence her whole life.—W. Zentmayer in *Ann. Ophth.*

NEW AND SIMPLE APPARATUS FOR SALVARSAN ADMINISTRATION *

G. French S. Cary, M.D., Baltimore

The apparatus consists of two glass bottles graduated up to 240 c.c. in units of 40 c.c. each; one 50 c.c. glass and metal syringe fitted with a mineral-wool-packed plunger; one two-way stop-cock which is fitted to the end of the syringe; one two-way Y stop-cock which controls the fluid coming from each of the bottles; four pieces of rubber tubing and two rubber stoppers; and a specially made needle with a slip-on joint which fits a small glass handle which has one end ground to fit the needle. A simple aluminum stand with clips to hold the bottles completes the outfit. The whole apparatus may be placed in a sterilizer and boiled, and is so compact that it can be carried easily in one's grip if necessary. The salvarsan or neosalvarsan solution may be made directly in either one of the graduated bottles, thus saving the use of extra glassware, such as graduates, pipets, mixing flasks, etc. The aluminum stand allows change of position of the apparatus during the administration of the drug, which is often necessary. The slip-on needle does away with washers, and allows the operator to expel all the air from his tube after the needle has been introduced into the vein, while the glass handle acts as a guide for the operator; as blood will appear in this handle as soon as the needle is in the lumen of the vein. One of the bottles may be used for either sterile water or saline solution, thus enabling the operator to wash out the vein before, during or after the injection of the drug.



Syringe for injection of salvarsan. Glass handle guides operator. Two bottles enable alternate use of drug or water.

SUMMARY

The advantages that suggested themselves to me in working with this apparatus are as follows:

1. The glass handle fitted with a slip-on needle is of great advantage because just as soon as the needle has properly entered the vein the blood will flow back into the glass handle, which saves the injection of fluid into the tissues until the operator is certain he is in the vein.
2. Since the salvarsan and distilled water are in separate bottles, both connected directly with the syringe and controlled by a two-way Y stop-cock, the operator can use solution from either bottle at will.
3. The fact that the bottles are graduated in units of 40 c.c. each permits the drug to be mixed in the bottle, as each unit of 40 c.c. of water is sufficient for 0.1 gm. of salvarsan.
4. The compactness of the apparatus makes it possible to carry it in a small space.

410 Professional Building.

RETROPERITONEAL RUPTURE OF THE APPENDIX WITH EXTRAVASATION OF PUS INTO AND GANGRENE OF THE ENTIRE THIGH

Jacob R. Buchbinder, M.D., Chicago

I wish to present the following report not so much because of the diagnostic interest attached as because of pathologic findings of rather unusual rarity and variety.

Patient.—Mary R., negress, aged 21, entered the service of Dr. F. A. Besley in Cook County Hospital, Feb. 22, 1913. No history could be obtained, at the time of admission, because of the altered mentality of the patient, who was brought in by the police, unaccompanied. The following facts were obtained twenty hours later from a relative.

History.—Ten days before admission the patient had been seized with a sudden severe attack of abdominal pain, confined to the right side. She became nauseated and vomited repeatedly for twenty-four hours. The pain persisted, the nausea ceased at this time, and two physicians who then saw the case made a diagnosis of acute appendicitis. Five days later when the abdominal pain had lessened in severity, and the patient felt well enough to leave her bed, she was seized with severe pain in the right thigh, accompanied by repeated chills and a feeling of feverishness. On the following day considerable swelling of the thigh was noticed, and became progressively greater until admission to the hospital. In the past she had always been in good health; no pregnancies.

Examination on Admission.—The patient was a young negress of large stature and well-developed musculature; intensely septic-looking. The body was covered with fine drops of perspiration; respirations very rapid and shallow. The pupils were widely dilated and reactionless, the eyes presenting a peculiar stare, while the mental condition was that of alternating stupor and a low muttering delirium.

Chest: Lungs entirely negative. Heart rate rapid, but otherwise negative.

Abdomen: Moderately distended and tympanitic; rigidity moderate and apparently equal on both sides. Palpation in lower right quadrant aroused patient and caused her to cry out. In no other way (save that mentioned below) could a response be obtained.

Extremities: The right thigh was enormously swollen from hip to knee. The skin, smooth, tense and glossy, indented on digital pressure. The knee-joint was distended with fluid. The entire thigh was exquisitely tender, and touching any part of it caused the patient to cry out. Tendon reflexes were barely present.

Vaginal Examination: Cervix hard and freely movable; fundus retroverted. No other palpatory findings.

Rectal Examination: Negative. A colonic flushing given at this time resulted in a small amount of flatus.

Temperature: On admission 97.6; rose steadily to 103.6 during the next twenty-four hours.

Pulse: At first 120, very weak and snappy; in the course of from twelve to sixteen hours became imperceptible at the wrist.

Respirations: On admission 32; in a few hours hovered between 50 and 80.

Laboratory Findings: Leukocytes 15.000; polymorphonuclears 94 per cent. *Urine showed a faint ring of albumin;* nothing else.

By the time a history and consent for operation could be obtained, the condition of the patient excluded such procedure. Death occurred twenty-nine hours after admission.

Necropsy.—On opening the abdominal cavity the following conditions presented:

The small bowel was moderately distended with gas; the visceral peritoneum lusterless. There were no adhesions, no fluid nor other exudate in the general peritoneal cavity. The parietal peritoneum presented its normal luster. The edge of the liver projected just below the costal border. In exerting slight traction on the cecum in order to bring it into view, several ounces of thin yellow pus welled up beneath the cecum, and between it and the abdominal wall. There were no adhesions between the latter and cecum.

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* From the Genito-Urinary Clinic of the Johns Hopkins Hospital, Baltimore.

Without further disturbing relations, the small bowel was crowded away, and the following unique picture presented:

The appendix, retrocecal, had become adherent by its tip to the posterior portion of the parietal peritoneum about on a level with the head of the cecum. It was much thickened and markedly inflamed along its entire length, and the tip had become gangrenous and sloughed off. An opening the size of a dime was present at this point in the peritoneum, the edges of which were ragged and sloughing, and into this the appendix dipped, discharging its contents retroperitoneally.

When the peritoneum was opened along the inner border of the cecum and the ascending colon, a large retroperitoneal pocket extending as high as the lower pole of the right kidney was found. This contained pus, fecal concretions and sloughing tissues. The ascending colon was negative The same pocket was then exposed in a downward direction behind the pelvic peritoneum. Here it was found that the pus, flowing over the iliac muscle, had extended into the thigh beneath Poupart's ligament through a kind of necrotic trough in the muscle, just external to the anterior crural nerve.

The incision started on the abdomen was carried down the right thigh, well below the knee. Pus in great quantities poured from the incision, which extended to the deep fascia. All of the superficial muscles anteriorly, laterally and two or three of the deeper ones posteriorly, were necrotic, a dirty grayish-brown color and of the consistency of butter. The finger could readily be pushed through them. The muscles closer to the femur were unaffected except for edema; in several places, however, the pus had begun to seep along fascial plains to deeper structures.

The periarticular structures of the knee were almost liquefied, and from there extension upward into the fatty subcutaneous tissues had occurred. The knee-joint was filled with a clear serous fluid. The hip-joint was unaffected. Neither femur nor tibia showed any changes externally or in the medullary canal. No evidence of embolus or thrombus could be found in artery or vein. The pelvic viscera were normal in every respect. The heart showed swelling and pericardial hemorrhages. Other viscera showed nothing of consequence. The causative organism was a colon bacillus.

TORSION OF THE SPERMATIC CORD

Israel Kleiner, M.D., New Haven, Conn.

Torsion of the spermatic cord, a fairly rare condition, was first described by Delasiauve in 1840. Scudder in 1901 published the report of a case[1] and reviewed the thirty-one other cases that had been reported in the literature up to that time. No doubt many cases have been reported since but I have been able to find the records of only fifty-four cases, most of them in the foreign literature. Many cases are probably overlooked as the patients recover spontaneously, and some are probably operated on for strangulated inguinal hernia, as were the patients in some of the reported cases. The rarity of the condition and the difficulty of differentiating it, in diagnosis, from strangulated inguinal hernia lead me to report the following case.

Patient.—H. H., boy, aged 15, was seen March 21, 1912, at 4 p. m. He complained of severe pains in the right groin, which began at 3 p. m. He had shoveled a heavy snow from the sidewalk at 1 p. m.; went to school as usual and felt well. He was called on to recite at 3 p. m.; had his foot twisted behind his chair and in attempting to arise was seized with a sudden severe sickening pain in the right groin. Patient said he felt all gone. He could not move his right leg without causing excruciating pain; had to be carried to a carriage and taken home. He had eaten nothing unusual that day. Bowels had moved well day before. There was no history of injury and no trouble with urination. He had always been well. He had had enlarged cervical lymph-nodes several years ago. Two slight attacks of appendicitis three years ago. Family history was negative.

Examination.—(4 p. m.).—Well-developed boy, in bed apparently in severe pain. Temperature 99.6; pulse 110. Right leg drawn up; severe pain caused by motion of leg. Heart, lungs and abdomen negative. Inguinal canal, in its lower third, extremely tender. The right testicle cord and scrotum so tender that examination was impossible. No impulse on coughing. Introducing the finger into the right external abdominal ring caused severe pain but did not reveal any hernia. No apparent swelling of the testicle or cord, although examination was unsatisfactory. Rectal examination negative except for large amount of feces in rectum. No urethral discharge.

Treatment and Results.—An enema was ordered and hot application of lead and opium wash applied to the scrotum. Scrotum was swung in an adhesive hammock. At 8 p. m., five hours after onset, patient was comfortable. He suffered no pain except when he attempted to move. Examination showed the right epididymis and testicle swollen to about twice the size of the left, cord also considerably swollen, both very tender, epididymis and testicle in proper relation to the other parts. The testicle was fully descended. Treatment was continued as before. On the following day examination showed the same condition: patient comfortable except when testicle was handled; very tender to touch. Two days later swelling had disappeared, but tenderness still persisted. Patient returned to school the following day.

Five months later, August 23, patient had a similar attack. He was sitting at a table playing cards when on shifting his position he was seized with the same sort of pain. Another physician attended him that evening. I saw him the following morning and he presented the same condition as previously described. This, however, cleared up entirely the following day and the boy was about playing as usual.

On examination since, the boy shows no abnormality of the testicle except for a slight varicocele on the left side. There does not appear to be any atrophy.

I believe this to be a case of true torsion of the spermatic cord, one in which the twist became untwisted in both attacks before any permanent damage was done to the testicle.

193 York Street.

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[1] Scudder, C. L.: Strangulation of the Testis by Torsion of the Cord, Ann. Surg., 1901, xxxiv, 234.

INCONTINENCE OF FECES (NON-ORGANIC)

L. H. Zeuch, M.D., Chicago

Incontinence of feces analogous to incontinence of urine, the origin of which can be traced to neuroses, general anemia or local parasites, is quite rare, judging from a review of the literature. In this disorder there is a relaxation of the sphincter ani, but not a paralysis. The muscle fibers respond to stimulation and are controlled at will, but formed stools pass through without the knowledge of the individual, as often as five or six times a day. No amount of moral suasion will control the disagreeable evacuations. Vegetable astringents, taken internally, are of no avail. Ergot, strychnin and hematic tonics have given success in the hands of others, but not until weeks have elapsed. To the list of reported cases I wish to add one occurring in my practice.

Case A. H., aged 8, whose father was a dipsomaniac, and mother very neurotic, had good control of the sphincters early in childhood. Last year he developed an acute nephritis, with general anasarca, which subsided on the administration of diuretics and other eliminative measures. After convalescence the mother noticed that he had lost control of the sphincter following a diarrhea. I was then consulted and prescribed vegetable astringents such as kino, krameria, gambir and others. The diarrhea stopped, but the incontinence of formed stools persisted. Night as well as daytime evacuations occurred to the number of from five to eight a day. I again tried tonics and bromids, but no results followed. The parents first used punishment and then bribery, but without avail.

After six months I examined him thoroughly, but found nothing to which I could attribute the difficulty. His voluntary control of the sphincter ani was practically normal. There was no evidence of seatworms, or prolapse of the mucous membrane. Except for a slight relaxation of the sphincter, everything seemed to be normal. Thinking seatworms a possible etiologic factor, I injected a solution of mercuric chlorid 1:10,000 high into the rectum with a pump syringe. He held a pint of this solution fully ten minutes and then had a copious evacuation of formed stools. Internally I prescribed 10-minim doses of fluidextract of ergot every four hours. Since that day, now a period of more than nine months, he has had control of his feces.

While it would not be wise to draw conclusions from the results of treatment of one case, I wish to suggest the use of 1:10,000 solution of mercuric chlorid. I have had no ill-effects from this solution in the treatment of seatworms and intolerable itching of the anus.

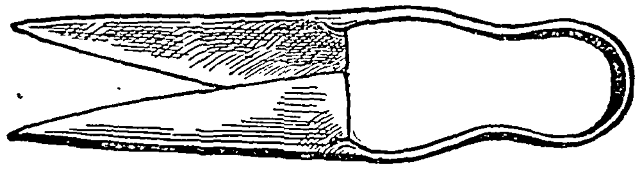
The result in my case was not due to the internal treatment, for the evacuations ceased before the ergot and tonics had had time to act, although they may have had a beneficial effect on the muscles, preventing recurrence.

3014 Fullerton Avenue.

MODIFIED SHEEP-SHEARS USEFUL IN SURGERY

Edwin M. Jones, M.D., Miami, Fla.

The model photographed here was made up by an inexperienced man, who, being a blacksmith, used only hammer, anvil and file, but it serves the purpose. The advantages of these shears are that they are easily differentiated from other instruments on the table; can be used with the left hand as well as the right; they are always ready to cut, being open and not difficult to grasp. They are especially useful in cutting sutures, thin tissues and dissecting.



Modified sheep-shears useful in surgery.

If taken up by an experienced instrument maker and modified somewhat, I believe that this very simple instrument will prove itself valuable.

909 Avenue C.

ANOTHER CASE OF SPOROTRICHIAL INFECTION IN MAN

G. S. Adams, M.D., Yankton, S. Dak.

A wide-spread and growing interest in the subject of sporotrichosis during the last three years, particularly in the middle West, is evident from the increasing number of cases of this infection that are being recognized and reported. There can be little doubt that when the nature of this infection is more fully understood by the general practitioner a large number of cases of refractory skin lesions, now diagnosed as tuberculous or syphilitic in origin, will be recognized and treated as sporotrichosis.

The following more or less typical example of the infection very well illustrates this fact. The physician who first saw the case had in mind tuberculosis or syphilis. The improvement following the administration of potassium iodid rather strengthened the latter diagnosis, but on account of the negative history, family and personal, the case remained a puzzler.

For the history of the case I am indebted to Dr. J. P. Isaac, of Freeman, S. Dak., who presented the case for diagnosis at a meeting of the Eighth District Medical Society, Dec. 31, 1912.

Patient.—Miss S. W., a farmer's daughter, aged 18, a native and resident of Hutchinson County, S. Dak., lived in North Dakota the greater part of the first twelve years of her life, but the last six have been spent mostly in South Dakota. She had not been away from home for some time previous to the beginning of the present trouble. Cutaneous history of the family is negative. There is no history of any preceding trauma. Patient first noticed a chain of small tumors on the extensor surface of the left forearm Nov. 1, 1912. When first seen by her physician, Nov. 28, 1912, there was an ulcer half an inch in diameter in the middle third of left forearm and a chain of small tumors extending to the elbow. The ulcer had a punched-out appearance, the border of the skin dark violaceous in color, infiltrated and undermined. The tumors were boggy, the overlying skin discolored, and a little seropus exuded when they were opened.

Patient was put on potassium iodid Dec. 21, 1912, before a diagnosis was made. One of the small tumors, which had broken down, was aspirated Dec. 31, 1912, by Drs. F. V. Willhite and E. V. Eyman of the State Hospital at Yankton, and several culture tubes inoculated. Jan. 6, 1913, the *Sporothrix schenckii* was recovered in pure culture from one of the tubes.

The iodid treatment began Dec. 21, 1912. The lesions were entirely healed by the end of January, 1913.

Special Articles

REPORT ON POST-MORTEM EXAMINATIONS IN THE UNITED STATES

By the Public Health, Hospital and Budget Committee* of the New York Academy of Medicine †

I. THE PAST AND PRESENT POSITION OF THE AUTOPSY IN MEDICAL EDUCATION AND PRACTICE
Horst Oertel, M.D., New York, Director of the Russell Sage Institute of Pathology.

II. STATISTICS OF POST-MORTEMS IN LARGE HOSPITALS OF THE UNITED STATES AND ABROAD
E. H. Lewinski-Corwin, Ph.D., New York, Executive Secretary of the Public Health, Hospital and Budget Committee of the New York Academy of Medicine.

III. SUMMARY OF THE REPORT; RECOMMENDATIONS

I. THE PAST AND PRESENT POSITION OF THE AUTOPSY IN MEDICAL EDUCATION AND PRACTICE

Horst Oertel, M.D., New York

Director of the Russell Sage Institute of Pathology

HISTORICAL

It is an interesting observation to the student of the history of medicine that the development of scientific medicine and therapy in any country and among all nations has been inaugurated by the systematic performance of post-mortem examinations which made possible the establishment of pathologic anatomy. Its neglect has invariably been attended by stagnation and scientific decay.

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*Members of the Public Health, Hospital and Budget Committee of the New York Academy of Medicine:

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Linsly R. Williams, M.D.

† Report approved by the Council of the Academy.

As in the rejuvenation of literature and arts, we owe to Italy the first decisive step in this direction. Preceded by the two Fantonis, it was essentially the merit of Morgagni (1767) to correlate the changes found in the body after death with the symptoms of disease. By post-mortem examinations he traced the underlying cause and seat of diseases; he localized diseased processes and furnished for the physicians of his times an objective idea of disease. In order fully to appreciate the magnitude of this work it must be remembered that before Morgagni's time ideas about the nature of diseases had been almost entirely imaginary and based only on very superficial knowledge of symptoms. Much was still unknown of the normal structure of the body, dissections of the human body had been rarely done and pathologic anatomy had consisted in a collection and description mainly of monstrosities and curiosities. Perhaps Morgagni's greatest accomplishment, therefore, was the consideration of usual and unusual evidence with equal scientific skill and criticism. This enabled him to arrive at much clearer ideas of the organic changes underlying the symptoms of diseases than had previously been possible. Morgagni's creation is therefore not strictly a system of pathology in the later and modern sense, but rather, as Haeser expresses it, a pathologic-anatomic explanation of symptomatology.

The second great step in this direction was made by Bichat in France (1771-1802), the founder of general anatomy. (It is reported that Bichat actually lived in the dissecting-room. In one winter he conducted personally 600 dissections—a very large number for that time. It undermined his health and caused his early death.) His work formed the direct foundation for the great French advance in medicine during the first thirty years of the nineteenth century. His influence is particularly noticeable in the works of the two great physicians of that time, Corvisart and Laennec. Bichat taught:

1. The body consists of general tissues which occur in all organs and in special tissues which are characteristic of an organ or "system" as he termed it.
2. Every tissue of the body may become diseased within itself.
3. All changes which constitute a disease of a tissue are essentially similar in character in all organs which contain this tissue.
4. Symptoms which occur during disease of organs in the body depend on changes in their respective tissues.
5. Sympathetic action is not so much the result of a relation of organs as it is evidence of relation of tissues.

These views opened an entirely new line of thought, for they were based on sound observation. Corvisart and Laennec, thus influenced, were able to make a considerable step forward of Morgagni. He had established the seat of diseases. But Corvisart and Laennec, standing on Bichat's shoulders, regarded pathologic anatomy as means to arrive at the *development* of diseases and therefore saw in it the underlying foundation of physical diagnosis. Thus the way was paved for the introduction and development of percussion and auscultation by Corvisart (1808) and Laennec (1815-19) and the revival and augmentation of Auenbrugger's work on percussion, which through ignorance and neglect had remained hidden for fifty years. Corvisart resurrected and enlarged it. Thus Bichat's work assumed an importance in the development of medicine which may justly be compared to the discovery of the circulation of the blood by Harvey.

A similar picture is presented somewhat later in Vienna. It is the work of one man, Rokitansky (1804-1878), professor of pathologic anatomy at the University of Vienna. Rokitansky possessed unusual industry and technic, coupled with excellent judgment and power of observation. He, as the first, regarded the anatomic changes in the organs as expressions of a *genetic* development of a disease. Rokitansky, therefore, endeavored to trace the character and relationship of processes of disease and laid the cornerstone of modern general pathology and particularly pathologic histology, that is, the microscopic investigation of diseased tissues. He emphasized in his farewell address that pathologic anatomy is the solid foundation of pathologic physiology, that is, the study of diseased functions, and of clinical medicine.

Thus Rokitansky became the founder of a school of medicine which soon was to be famous the world over as one offering the best opportunity to study the relation of symptoms to the organic changes in the body. Vienna became a veritable Mecca for the education of thousands of physicians from all parts of the world until a rival arose in Germany, which under the influence of the greatest pathologic anatomist went further in its scientific development and education than any country had gone before.

The development of scientific medicine in Germany is perhaps the most instructive of all. In the first half of the nineteenth century it had remained far behind France, England and Austria. But during the second half of that century it was lifted by the all-controlling influence of a pathologic anatomist, Virchow, from a position nothing short of ridiculous to a position of greatness and leadership. German medicine through the first half of the nineteenth century had been under the influence of the speculative natural philosophy of Schelling. Long after France, England and Austria had made serious efforts to overcome the purely speculative ideas and systems, German *medicine by clinging to them had reached* a point of lowest level. In the preface to the great encyclopedia of medicine edited by Virchow, who had just begun his work, he says significantly (1854): "German medicine on account of its views and dissenting 'schools' has become the laughing-stock of the world." There did not exist a well-founded universal *scientific method of thought, investigation or teaching,* but only opposed and battling "schools" and "systems" of medicine and therapy such as homeopathy of Hahnemann, polypragmasia, Rademacher's system, Priessnitz' system, therapeutic nihilism, eclecticism, Bouillaud's bleeding to unconsciousness of the patient, Dietl's absolute condemnation of bleeding *as a criminal offense* (1849), *Mesmerism and others.* They formed the source of endless and senseless discussions, for they were all speculative and contributed much to the entertainment of their pompous defenders and the laity but not to the benefit of their patients. In other words, therapy absolutely lacked a scientific objective support and backbone, for there existed in pathology only individualism and, therefore uncertainty. It was not even a time of crude empiricism, but a phantastic period which like a nightmare in individuals occasionally arises during the life of a nation.

An interesting illustration of what was then taught in pathology was given to me by Professor Senator in Berlin in the form of a syllabus used by Professor Schultz-Schultzenstein in his lectures in 1851 which Senator had still attended in his student days. The title of this syllabus is: "The Natural Families of Diseases, Berlin, 1851," and it contains this passage which I shall translate rather literally: "Disease has, although it represents a process of death, an organic combination of several actions, which develop from the innermost part of one nucleus. This nucleus is its principle. Disease grows from this nucleus to a system of actions. In this system the nucleus represents the fundamental action, the stem of disease, from which extend many branch actions as, for instance, constipation, colic, vomiting, fever, etc." Another passage: "The fundamental character of a disease may be either melanotic, apeptic, anaplastic, bilious, dysplasmatic; further anarethic, paralytic, but each of these may combine with those of opposite characters as branch actions." (The original German of this text has been published by Senator in his farewell address in *Berliner klinische Wochenschrift*, 1910, No. 34.) It will be seen that it is not made more ridiculous by the translation, as one might suppose. It is interesting to compare with it a passage from an article published in New York in 1909 by an author who shall remain nameless: "Chronic Bright's disease begins, in the vast majority of cases, as a general perversion of metabolism, excited by either simple strain or toxic inhibition of function, and continues for years, presenting just as definite signs of renal distress as are suppression or coma. It is in these early stages of functional strain precedent to organic injury which are too frequently ignored, that Bright's disease is definitely curable. In this stage the obtrusive symptoms may be anything from grumpiness to goiter, from pestering activity to angina pectoris, etc., etc." Does not the same unsound speculative spirit of the early nineteenth century in Europe appear to reecho in America in the early twentieth century? Such peculiar and phantastic and mysterious systems existed in considerable number.

Virchow arose, out of this apparently hopeless chaos, first assistant to Froriep in the Charité Hospital in Berlin; he removed to Würzburg on account of many personal difficulties, but was called back to Berlin as professor of pathologic anatomy in spite of personal and political obstacles. It was one of the most far-sighted and commendable acts of the Prussian government, which declared thereby that a man's political creed and personal opinions have nothing to do with academic positions.

Virchow taught and demonstrated at the autopsy table with a system, perseverance and force never approached before, that every disease represented an anatomically localized process and that, therefore, the goal of all pathologic conceptions must be objective knowledge of, and location of the diseased processes—no speculative idea. Herein he was more radical than any of his predecessors, not excepting Rokitansky. Virchow broke with all traditions of scholasticism and recognized only deductions based on actual observation. He held that every physiologic process possessed an anatomic corollary; a disease, therefore, finds expression in anatomic, visible processes. The anatomic changes *represent* the disease. The only method, therefore, to arrive at a correct knowledge of the origin and course of a disease is to correlate the undeniable and visible autopsy experience of many cases, and to reproduce them experimentally. Thus vanished all speculation and discussions about the mystic character of diseases, which even Rokitansky had not entirely escaped. Virchow aroused sometimes much ire and controversy among his old pompous colleagues by actually "holding their mistakes under their own noses" at an autopsy.[1] He soon convinced the younger generation of the truth of his assertions, however, and the strength of a government position which made it impossible for his enemies to have him removed gave him an opportunity to declare himself forcibly and openly. In this he was not too reluctant as the many complaints about him to the minister of education testify. By strength of his academic position Virchow was able to declare his entire independence, and he made his laboratory for the first time of any in the world an independent scientific institute, which was not as formerly a mere addition for the immediate needs of the hospital. It enjoyed a building of its own, elegantly fitted up for those times. It became a great place not only of research but also of training in pathology. Virchow was most successful in this. It may be said without exaggeration that during his activity there was probably not a professor of pathology, medicine and surgery in Germany, to say nothing of foreign countries, who had not been taught or deeply influenced by him. The great pathologic institutes in Germany to-day are of his spirit, and under that spirit still devote the greatest attention to that branch of science which is intimately connected with the experience derived from post-mortem examinations. It forms the all-important pillar of German preeminence in medicine, and it served as the most striking example of the influence of pathologic anatomy on scientific thought and development in medicine in any country. It was Virchow's greatest pride that he had taught physicians to think anatomically—that is, objectively. It was of greater consequence to the welfare of communities than a dozen individual brilliant discoveries.

THE PRESENT POSITION OF PATHOLOGIC ANATOMY

Having established in a general outline the historic fact of the remarkable influence of the study of disease after death on the scientific development of medicine and therefore on the welfare of the living in all countries, it becomes necessary for me to present the importance of this study in greater detail and to trace the reasons for its great influence on scientific medical thought.

Mention has already been made of the fact that the experience at the autopsy table has two sides: a purely scientific and an educational. We shall view them independently. The enormous advances in medicine have demanded in the course of time somewhat of a division of labor. We can recognize at the present day two main groups of investigators—those who deal with the direct cause and prevention of disease, the bacteriologists; and those who explore the disease after its establishment in the body: they determine the natural history of a disease. It is the chief duty of the pathologic anatomist, who is aided in it by experiment and chemical research.

The fact that we know to-day the direct causes of many diseases does not allow us to dispense with the services of the autopsist and microscopist. If, for example, it should ever be proved that cancer was an infectious or parasitic disease, we should be no nearer the understanding of the nature of the cancerous process than before. *For the most important question would remain unsolved, namely, how any parasite could induce cells to grow characteristically and incessantly to the destruction of the whole organism. But, after a disease is established in a person, is it not of great consequence to know what visible changes in cells and tissues lead to or are associated with such destructive action? I need only mention the difficult question of dissemination of cancer cells and their growth in distant parts of the body. Only a full understanding of the factors determining these phenomena will allow an intelligent treatment.*

Another illustration: We know that "diphtheria" is caused by a specific micro-organism, and also that it may be controlled largely by its antiserum. But the problem of the character of the diphtheritic process in the throat and the other changes the disease produces in the body can be solved only by careful post-mortem investigation. This gives us information about important features of the disease: for example, a child may have died very unexpectedly during what appeared to be a mild attack of this disease. We are at a perfect loss to understand why until we examine the heart and find it markedly and unexpectedly diseased. This is information we could never derive from a study of the cause of the disease, but if we find post-mortem evidence of it in many cases of diphtheria we are justified in concluding that diphtheria is a disease which exhibits a marked tendency toward a characteristic involvement of the heart. But a fact thus established by autopsy is of the greatest practical importance, for it directs the attention of the physician to what he must carefully watch and guard against during this disease. Such examples could be readily multiplied, many of them very complicated and therefore still unsettled and under investigation, for there are many diseases in regard to the causes or the mode of action of which we are still uncertain. Some diseases are much complicated by environmental influence; others are the results of several causes one of which may modify the action of the other. Take, for instance, the much-talked-of arteriosclerosis. It is not a disease that can be traced to a definite micro-organism at all. The direct causative effect of alcohol is very uncertain, to say the least, and its manifestations in people living under different social and economic conditions very different. Angina pectoris, one of the important causes of death among the well-to-do in later life (the so-called death of heart-disease) occurs very rarely in the poorer classes. In charity hospitals it is almost unknown. What is the cause of this? Only a very careful comparison of the manifestations of this disease among all concerned will lead ultimately to a solution of this difficult and practically so important problem.

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[1] Virchow was much aided in his earlier days by his forceful friend Reinhard, who unfortunately died too young to become generally recognized. Virchow paid him a great tribute in the fourth (1852) and one-hundredth (1885) volumes of his Archiv.

Another illustration: The fact that the tubercle bacillus has been definitely known as the cause of tuberculosis has not at all settled the manner and method of infection. There is even now a decided difference of opinion as to how the infection and dissemination of the tubercle bacillus through the body occurs. Is it inhalation? Or ingestion? How is the bacillus or its toxins carried through the body? Why does it settle in one part and not in another? What changes does it produce in tissues? What diseases are caused by this bacillus? There are many obscure, doubtful glandular diseases the relationship of which to the tubercle has not been determined. How will these questions be solved? Only by the anatomic investigation which alone can trace the origin of a lesion and its manifestations through the body.

Finally, one more example of the same type: Pneumonia is a well-understood disease as far as its causes are concerned, but what determines its manifestations? What is responsible for its course, good or bad, its terminations into abscess of the lung or gangrene and its malignant character among the aged? Here the autopsist comes again to our rescue and explains these perplexing questions on the hand of his structural observations. He shows that the good termination depends on the unhindered removal of the inflammatory products through natural channels, the lymphatics, and the bad on blocking or obliteration of these paths of resorption; that in the lung of the aged the elasticity and many important structures which aid in the removal of inflammatory products have been lost in the process of aging and that therefore this infection is so much more dangerous. Moreover, in the study of hereditary diseases which descend from generation to generation, it is of great importance to study closely the changes which lead to death in an individual in order to know how to safeguard the interests of the survivors, and eventually to eradicate the disease from future generations and descendants.

While the foregoing examples relate to individual cases of disease, the regular systematic performance of autopsies assumes much wider and general dimensions in the collection of reliable trustworthy statistics. It is not generally recognized how much still remains to be done in this line. A correct scientific diagnosis of a disease, such as is demanded for a useful record, can be made only after death by one well trained in pathologic anatomy. Our present American statistics as kept by almost all boards of health in this country are extremely faulty and are scientifically worthless. Even not considering those returns of the cause of death made worthless by neglect, stupidity and by intent—and they are not too infrequent—all purely clinical diagnoses that are based on uncertain symptoms only must remain pure conjectures that lack the necessary objective proof. But reliable statistics are of the greatest consequence to a nation. Take alone the cancer question. Is cancer really on the increase or only apparently so? Professor Bashford, director of the Imperial Cancer Institute in London, has severely criticized the American statistics in this regard and asserted that the returns from Ceylon were more reliable than those from New York. The same is true of other important diseases: of the heart, Bright's disease, etc.

There is no absolutely certain clinical diagnosis, and even if the autopsy proves the main diagnosis correct it almost always discloses important associated lesions which in their obscurity escape even the most careful clinical observer. Nevertheless these may have an important bearing on origin, course and symptoms of the disease. Dr. Cabot, an eminent diagnostician of Boston, has recently published[2] the percentages of correct clinical diagnosis of what appeared to be the most important lesion revealed by 3,000 autopsies. These are here appended, and it must be noticed that only a few of the most evident diseases exceed 75 per cent. in the hand of an experienced diagnostician; many important diseases fall below 50 per cent. in recognition, some even below 25 per cent.:

TABLE 1.—PERCENTAGE OF CORRECT DIAGNOSES IN VARIOUS DISEASES

	Per cent.		Per cent.
Diabetes mellitus	95	Miliary tuberculosis	52
Typhoid fever	92	Chronic interstitial nephritis	50
Aortic regurgitation	84	Thoracic aneurysm	50
Cancer of colon	74	Hepatic cirrhosis	39
Lobar pneumonia	74	Acute endocarditis	39
Chronic glomerulonephritis	74	Peptic ulcer	36
Cerebral tumor	72.8	Suppurative nephritis..	35
Tuberculous meningitis..	72	Renal tuberculosis	33.3
Gastric cancer	72	Bronchopneumonia	33
Mitral stenosis	69	Vertebral tuberculosis .	23
Brain hemorrhage	67	Chronic myocarditis	22
Septic meningitis	64	Hepatic abscess	20
Aortic stenosis	61	Acute pericarditis	20
Phthisis, active	59	Acute nephritis	16

It is also interesting to record in this connection that Professor Orth, director of the Pathologic Institute in Berlin, makes the statement that of all appendixes that have been submitted to him for examination by conservative surgeons with the clinical diagnosis of appendicitis, as many as 17 per cent. showed no disease.

This takes us to the educational value of post-mortem examinations.

The historical introduction has shown that the indisputable facts of an autopsy prevent useless speculation and discussion. With an elementary force pathologic anatomy keeps the truth before the eyes of student and practitioner. It furnishes their conceptions of disease a backbone of actual facts and it impresses on them true visual ideas of diseased processes without becoming phantastic, and last—not least—it makes the treatment scientific and reliable.

The student and physician who think anatomically think truthfully—they need no "school" or "system" of ideas to speculate about the character of a disease. They see and therefore know what actually occurs. They must only be given opportunity to enlarge their experience in that direction. Such a physician applies a treatment not because it rests on a premise of some one else's authority, a premise that he can neither prove nor disprove, but because he has personal knowledge of a disease by his own observations: he knows its character and therefore how it may or may not be beneficially influenced. He is not, to use the old grotesque expression, like the blind man in a dark room looking for a black cat that is not there, but a scientist, no matter how humble a practitioner, who approaches his patients with the certainty and moral conviction of real knowledge. Individual "schools" and "systems" of medicine have therefore almost entirely disappeared in Germany. Only remnants still exist, like the memory of a nightmare the morning after. The state recognizes, teaches only and requires a severe examination in scientific medicine.

It is said that if a country wishes to shape its destiny, it must study the history of others. America is fortunate in that respect. It has before it the combined and sometimes sad experiences of centuries of Europe and it is free to adopt or to discard. Should it not profit by this experience? This is what Goethe meant, when he said:

> Amerika Du hast es besser, als unser Continent der Alte!

II. STATISTICS OF POST-MORTEMS IN LARGE HOSPITALS OF THE UNITED STATES AND ABROAD

E. H. LEWINSKI-CORWIN, PH.D., NEW YORK

Executive Secretary of the Public Health, Hospital and Budget Committee of the New York Academy of Medicine.

In order to obtain statistical evidence of the amount of autopsy work performed in some of the largest institutions in this country and England and Canada, letters were sent out to twenty-eight hospitals inquiring as to the number of deaths for the last three years ending December, 1912, the number of autopsies performed during the same period, the percentage of correct clinical diagnoses as revealed by the autopsies, and the laws and regulations governing the performance of autopsies.

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[2] Cabot, Richard C.: Diagnostic Pitfalls Identified during a Study of Three Thousand Autopsies, THE JOURNAL A. M. A., Dec 28, 1912, p. 2295.

Replies have been received from eighteen institutions in this county and eight hospitals abroad. Statistics of the German and Austrian hospitals were obtained from the *printed reports of the institutions.*

All the statistics have been arranged in Tables 2 and 3.

The striking fact brought out from the comparison of the statistics of autopsies in foreign hospitals and in American hospitals is that the percentage of autopsies performed in our largest hospitals, some of them connected with teaching institutions, is but one-eighth of the percentage of autopsies performed abroad. While the University College Hospital of London reports an average of 84 per cent. of autopsies, St. Thomas' Hospital of London reports an average of 75 per cent., St. Bartholomew's of London an average of 79 per cent., another English hospital an average of 83.7 per cent., the Montreal General Hospital an average of 83 per cent., Bellevue Hospital of New York performed autopsies on only 10 per cent. of patients dying in the hospital, Boston City *Hospital* on 9 per cent., and the Philadelphia General Hospital shows an average of a little over 10 per cent. And these are the three largest hospitals in the country. Other hospitals show a still lower percentage, while a number of the smaller hospitals in which the number of deaths is comparatively small show much higher percentages. Thus, Johns Hopkins Hospital had post-mortems performed in 62.8 per cent. of cases and the University of California Medical School Hospital in an average of 42 per cent. of cases, but the total number of deaths in these two institutions for the last three years amounted to 705, all told, while the number of deaths in Bellevue alone for the same period was 8,918, in Boston City Hospital 4,421, and in the Philadelphia General Hospital 5,921 —a total of 19,260 deaths as against the 705 cases of the two institutions in which the percentage of autopsies is relatively high.

The relative as well as the absolute number of autopsies in some of the American Hospitals has been constantly falling

TABLE 2.—STATISTICS OF AUTOPSIES IN AMERICAN HOSPITALS

(Exclusive of Medicolegal Cases)

Name of Institution	Year	Number of Deaths	No. of Autopsies Performed	
			Total	Per Cent.
Bellevue Hospital, New York. ..	1910	2,968	301	10.1
	1911	3,035	354	11.6
	1912	2,915*	343	11.8
Presbyterian Hospital, New York	1910 1911 1912	1,146	281	24.5
New York Hospital, New York..	1910	460	103	22.4
	1911	524	87	16.6
	1912	457	94	20.6
St. Luke's Hospital, New York..	1910 1911	618	89	14.4
Mt. Sinai Hospital, New York.	1910 1911 1912	719 738 705	158	7.3
House of Relief, New York	1910	230	36	15.6
	1911	184	57	30.9
	1912	206	74	35.9
Massachusetts General Hospital, Boston	1911	475	143	30.1
	1912	429	66	15.4
Boston City Hospital, Boston....	1910	1,327	195	14.7
	1911	1,483	113	7.6
	1912	1,611	100	6.2
Louisville City Hospital, Louisville, Ky.	1910 1911 1912	698	120	17.2
San Francisco City and County Hospital, San Francisco	1910 1911 1912	1,486	670	45.1
University of California Medical School Hospital, San Francisco	1910	66	18	27.3
	1911	51	22	43.1
	1912	37	21	56.8
New Haven Hospital, New Haven Conn.	1910	254	37	14 6
	1911	235	16	6.8
	1912	269	23	8.5
Johns Hopkins Hospital, Baltimore	1910 1911 1912	551	346	62.6
Jefferson Hospital, Philadelphia..	1910 1911 1912	620	104	16.8
Buffalo General Hospital, Buffalo, New York	1910 1911 1912	896	117	13.1
Albany Hospital, Albany, N. Y..	1910	239	24	10
	1911	268	22	8.2
	1912	272	13	4.8
Philadelphia General Hospital Philadelphia	1910	2,122	324	15.3
	1911	2,050	293	14.3
	1912	1,749	196	11.2

*Up to December 1.

TABLE 3.—STATISTICS OF AUTOPSIES IN FOREIGN HOSPITALS

(Exclusive of Medicolegal Cases)

Name of Institution	Year	Number of Deaths	No. of Autopsies Performed	
			Total	Per Cent.
Montreal General Hospital, Montreal, Canada	1908	292	235	80.4
	1909	294	229	77.9
	1910	272	235	86.4
Royal Victoria Hospital, Montreal, Canada	1910	297	...	73
	1911	267	...	62
	1912	264	..	67.8
Toronto General Hospital, Toronto, Canada	Oct., 1911 to Sep., 1912	321	82	26.3
University College Hospital, London, England	1910	333	276	82.8
	1911	284	244	85.9
	1912	257	217	84.4
St. Thomas' Hospital, London, England	1910	622	468	75.2
	1911	676	486	71.9
	1912	611	473	77.4
St. Bartholomew's Hospital, London, England	1910 1911 1912	2,010	1,597	79.4
Royal Infirmary, Edinburgh, Scotland	1910 1911 1912	2,466	1,453	58.9
Large English hospital whose name cannot be divulged... ..	1910 1911 1912	4,037	3,378	83.7
*Charité Hospital, Berlin, Germany	1910	1,588	1,480	93
	1911	1,597	1,472	92
	1912	1,527	1,419	92
*Eppendorf Hospital, Hamburg, Germany	1908	2,322	2,012	86
	1909	2,417	2,181	90
	1910	2,487	2,220	89
*St. Georg Hospital, Hamburg, Germany	1908	1,272	1,129	88
	1909	. ..	1,218	.
	1910	.....	1,168	..
Pathological Institute, Leipsic, Germany	1900	1,082	1,018	94
	1901	1,224	1,139	93
	1902	1,246	1,160	91
	1903	1,325	1,213	91
	1904	1,385	1,258	90
	1905	1,516	1,352	89
	1906	1,562	1,383	88
	1907	1,719	1,531	89
University Hospital, Breslau, Germany	1905	....	487	90.7
	1907	.....	534	91.9
	1908	.. .	570	93.4
Allerheiligen Hospital, Breslau, Germany	1905	. . .	715	70.5
	1907	....	1,038	87.6
	1908	...	1,077	89.8
Allgemeines Krankenhaus, Vienna, Austria	1903	1,950	1,793	91
	1904	1,867	1,866	99.9
	1905	1,929	1,875	97
Eight other hospitals, Vienna, Austria	1903	6,690	5,213	77
	1904	6,820	5,517	80
	1905	7,364	5,722	77

* The remaining percentage includes not only refusals, but legal cases.

off within the last few years. The number of autopsies in the Boston City Hospital was 195 in 1910, 113 in 1911, and only 100 in 1912, while the number of deaths in the hospital in that year was 1,611 as against 1,327 death in the year 1910. In the New Haven Hospital the percentage of autopsied cases fell from 14.6 in 1910 to 6.8 in 1911 and 8.5 in 1912. In the Albany Hospital the percentage of post-mortems has dwindled from 10 in 1910 to 4.8 in 1912, and in the Philadelphia General Hospital 324 post-mortem examinations were held in 1910 and only 196 in 1912. The variations from year to year in the number of autopsies in the English and European hospitals are insignificant and they never fall below 70 per cent. When the Philadelphia General Hospital had 196 post-mortems for its 1,749 deaths, Bellevue 343 for 2,915 deaths and the Boston City Hospital had 100 autopsies for its 1,611 deaths, in the Allegemeines Krankenhaus of Vienna 1,866 cases out of a total of 1,867 deaths came to autopsy in one year. In the Eppendorf Hospital, Hamburg, 2,220 cases out of a total of 2,487 were autopsied, and 244 out of 284 dying in the hospital came to autopsy in the University College Hospital of London in 1911.

Five causes can be assigned for this pitifully poor showing of our hospitals: (1) adverse public opinion and existing prejudices; (2) the existing law; (3) the undertakers and burial societies; (4) hospital rules, and (5) the claims of the departments of anatomy.

1. Adverse Public Opinion and Prejudices.—In no other civilized community is there so much aversion to post-mortem examinations as in this country. This is partly due to the fact that no great effort was made in the past century to perform them. We have not endeavored in the past to be in the vanguard of medical science and education, and did not attempt to impress the public with the importance of autopsies to medicine and to mold public opinion in favor of them, although we had autopsies performed in this country as far back as the first half of the seventeenth century.[3]

When the public recognizes that autopsies are indispensable for the progress of medical and surgical science, for the proper understanding of the diseases, and for the adequate training of physicians, and are essentially different from anatomic dissection, the existing prejudices will be overcome and the present adverse attitude changed.

With the great abundance and variety of material in our hospitals, with our equipment and facilities, and with the large corps of scientific workers we possess, a great stimulus to medicine would be given if the prevailing public opinion and the present laws with regard to autopsies could be changed.

2. The Existing Law.—The Laws of New York Relating to Autopsies: Outside of legal cases, in which death is caused by homicide, suicide and accident, or occurs suddenly or in a suspicious manner, which come under the jurisdiction of coroners and prosecuting officers, and in which inquests on the bodies may be held under the authority of the penal code, all other post-mortem examinations in New York state can be performed only so far "as the husband, wife or next of kin of the deceased, being charged by law with the duty of burial, may authorize dissection for the purpose of ascertaining the cause of death,"[4] or if permission for autopsy was given by the deceased before or during the illness which caused the death.[5]

Autopsies which are performed without the consent of the next of kin are illegal and punishable as a misdemeanor even though the next of kin may not be known to the hospital or may reside in a foreign country or be beyond the reach of communication. No necropsy, no matter how scientifically important it may be, can be performed without the permission of the next of kin. In the majority of cases no autopsies can be performed on the unclaimed dead. The number of unclaimed dead in Bellevue alone was 654 in the year 1912. Then, when such permission is obtained, it does not always protect the man performing the autopsy. The permission obtained may prove invalid should relatives nearer to the deceased person than the one from whom consent was secured challenge the right of autopsy. The terms of the law giving the right to grant permission to the "next of kin" charged by law with the duty of burial and not clearly establishing the order of priority of relatives have given occasion to a number of lawsuits. Complications arise when the next of kin are minors or when there are several persons owning the same degree of relationship, and they are not agreed on granting the permission for a post-mortem examination. When no proper permission is obtained for an autopsy, action can be maintained for the illegal mutilation of the remains. In such an action a recovery may be had "for injury to the feelings and mental suffering" resulting directly and proximately from the wrongful mutilation of the body, although no actual pecuniary damage is alleged or proved.[6]

Even if the law should specify the order of priority, the burden of finding the proper person would devolve on the hospital or person desiring to perform the autopsy. Such searches are often impossible, and invariably mean unfortunate delay.

Moreover, in case no relatives are found, the authorization of a friend cannot safely be acted on, although the same friend can compel a hospital to deliver the body to him for burial.

As it now stands, our law relating to autopsies is indefinite in expression, uncertain in application, obsolete in spirit, detrimental to scientific progress and injurious to the best interests of the public.[7]

The Law in Foreign Countries: The British law, although old (dating back, practically unchanged, to Aug. 1, 1832) and containing provisions similar to ours, can, however, be interpreted much more liberally than ours. The two principles underlying the British law are:

1. No property resides in a dead body except so far that it belongs to the executors or relatives solely for the purpose of disposing of it according to law; and
2. No assault can be committed on a dead body.

It follows from these two principles that "in the mere act of performing an autopsy a medical man cannot be committing an offense known to the law, provided that as a matter of provable fact such has not been expressly forbidden by the subject during life, or his executors or nearest kin after death."[8]

Permissions for autopsy are easily obtained in England and lawsuits ensuing out of illegal post-mortems are very rare.

Regulations relating to the performance of autopsies are made by the hospitals. In some hospitals in England all patients, on entering, sign a form agreeing to a necropsy in the event of death. In others, the regulations are that autopsies shall be made on the bodies of all persons dying in the hospital or brought in dead. The representatives of the deceased are, however, at liberty to prevent the holding of an autopsy by giving due notice, and a statement to that effect is placarded in the hospitals.

The Canadian laws require permission of the nearest relatives, but in the Province of Quebec a law was passed a few years ago whereby all institutions receiving state aid may demand autopsies on the bodies of those who have been free patients.

In Austria the law provides that, as a matter of right and duty, every case—whether the patient be rich or poor—terminating in a general hospital, must be autopsied.[9]

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[3] Steiner, Walter R.: Some Early Autopsies in the United States, Bull. Johns Hopkins Hosp., August, 1903; Dewis, John W.: Champlain's Narrative of Early Autopsies in North America, ibid., May, 1905.

[4] Art. 198, Sect. 2213 of the Penal Law.

[5] Sec. 2210 of the Penal Law. [In 1910 the Supreme Court of California decided that one cannot dispose of his own corpse by will. See Henry W. Cattell: Post-Mortem Pathology, Ed. 3, Philadelphia, 1906, p. 5.]

[6] Darcy vs. Presbyterian Hospital, 202 N. Y. 259 at p. 262 (1911).

[7] A detailed discussion of the law will be found in the appendix a report of Philip J. McCook of the New York Bar, being an appendix to the committee report.

[8] Smith, Fred. J.: Law for Medical Men, London, 1913, p. 81.

[9] Flexner, Abraham: Medical Education in Europe, New York, 1912, p. 95.

In German hospitals autopsy takes place as a matter of routine, unless the contrary is specifically requested.[10]

With the growth of the appreciation on the part of the general public of the fact that medical science cannot progress or hold its own without the extensive anatomic and clinical use of the cadaver, and with the growth of general education and the gradual disappearance of prejudices, the laws of foreign countries relative to post-mortem examinations as well as the hospital rules regarding them have undergone changes which relieved the hospitals of the irksome burden of seeking permissions and at the same time left to the relatives the right to prevent an autopsy if they should so desire.

3. Undertakers and Burial Societies.—Another source of impediment to the work of the pathologist consists of the undertakers and certain burial societies. The first use it as a means of securing business; the others try to prevent autopsies on the basis of some religious prejudices. Our foreign population, accustomed to the matter of autopsies in the countries where they come from, would not think of objecting to them here were it not for the promptings of the undertakers and burial societies. One of the pathologists connected with a large hospital in New York, speaking of the absurdly small proportion of autopsies to deaths in the hospital, attributes it to the influence of undertakers in trying to prevent autopsies. "They seem to get wind of death of the patient," he writes, "before this has happened and they approach the family with the promise that no mutilation will be allowed if they are given the job of managing the funeral."

Then some religious burial societies are very largely active in preventing autopsies on the unclaimed bodies of their coreligionists.

4. Hospital Rules.—Only one of the American hospitals included in this inquiry requires, on entrance, a signed permission from the nearest relative for post-mortem examination in every case. No patient is admitted unless such permission is given. The adoption of this rule was deemed necessary owing to the importance of correcting the clinical and laboratory findings from the research point of view, and it is stated that this rule has proved extremely satisfactory.

In all the other hospitals the rule is to try to obtain permission after the patient's death, and this duty devolves on either the clerks or the interns. Their success in obtaining permissions depends much on their power of persuasion, sagacity, tact and interest in the matter. It has been found to be more practical to leave this duty to a medical man.

One hospital reports that there was a decided improvement in the number of autopsies at the hospital since the appointment of an assistant superintendent, a young physician who has taken over as a part of his duties the obtaining of permission for autopsies.

Another hospital attributes its good fortune in obtaining permission to the fact that extreme care is taken over the toilet of the cadavers subjected to autopsy and also to the fact that the office staff who receive the friends of patients dying in the hospital take a particular interest in urging that an autopsy be performed for the benefit of the family, that the family may know all about the presence of constitutional diseases.

If similar rules, regulations and practices should be adopted by private hospitals, they would undoubtedly prove beneficial in a great many instances.

5. The Claims of the Departments of Anatomy.—There exists one additional difficulty under the present law in utilizing all the material available in the hospitals, which has not hitherto been mentioned, namely: The demands of the departments of anatomy on the unclaimed dead, which constitute a large number of important deaths in public hospitals. Frequently unclaimed bodies which are very important from the pathologic point of view are thus used for dissecting purposes in the departments of anatomy.

This extremely unsatisfactory condition has arisen from the lack of recognition on the part of the law of the difference between anatomic dissection and a pathologic autopsy. The anatomic dissection is done for the purpose of systematic study of normal anatomy. This study necessarily calls for the permanent possession of the body and entails complete taking apart of the body. A pathologic autopsy, on the other hand, simply requires the opening of the various cavities of the body in order to disclose the pathologic lesions. It therefore consumes much less time and does not disfigure the body to any extent, and in its results to the cadaver is practically analogous to what is done in embalming.

To avoid all possible friction and loss of important material, it would seem advisable so to change the laws and rules with regard to this class of cases that the pathologists have unrestricted use of the cases which were clinically observed, while all bodies of persons dying outside of hospitals be distributed to the anatomic departments in ratio to the number of students. The distribution of the bodies could be most satisfactorily carried on under the supervision of a committee composed of all the professors of anatomy in the medical schools of the state.

PERCENTAGE OF CORRECT CLINICAL DIAGNOSES AS ESTABLISHED BY AUTOPSIES

This part of the investigation was the least successful. Only seven institutions answered the questions asked. The others stated either that no records are available or that no answer is possible.

The percentages of correct clinical diagnoses in four institutions were given as 60, 47, 78 and 71. In one hospital in which 200 cases were examined, the autopsy showed that 133 were rightly diagnosed, forty-three had a wrong diagnosis, and no diagnosis was made in twenty-four cases. In another instance of 100 autopsies, 10 cases were not observed longer than twenty-four hours, 12 were complete errors of diagnosis, 21 main diagnoses correct but important conditions not diagnosticated, and the remaining 57 cases were correct. In a third instance, out of 117 autopsied cases, 60 cases were correct, 14 incorrect, and in the remaining 43 cases the patients were in the hospital too short a time to permit a diagnosis to be made.

III. SUMMARY OF THE REPORT

1. The history of medicine shows that modern progress in medical science and the further development of medicine in the future is closely correlated with the extensive use of cadavers for post-mortem examinations.

2. In European countries the importance of necropsies has been universally recognized and neither public opinion nor prejudices, nor the law, cause any difficulties to the use of persons dying in hospitals for purpose of post-mortem examination.

3. The absolute and relative number of autopsies performed in American hospitals is extremely small in comparison with the number of autopsies performed in European hospitals.

4. Our research institutions, scientific bodies and medical colleges are greatly hampered in their work by the prevailing hostile attitude of the public and the law with regard to the performance of autopsies.

5. Our laws relating to autopsies are indefinite in expression, uncertain in application, obsolete in spirit, detrimental to scientific progress and injurious to the best interests of the public.

6. The main causes of the difficulties in obtaining permission for autopsies are due (*a*) to the ignorance on the part of the public of the importance of autopsies to science and therefore to the welfare of the people; (*b*) to the existing inadequate laws; (*c*) to the activity of undertakers and certain funeral societies, (*d*) to the inadequate rules of the hospitals in this respect, and (*e*) to the claims of the department of anatomy.

7. As a result of the slight opportunities given to physicians to study their errors of diagnosis, the percentage of incorrect diagnoses is unduly large.

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[10] Flexner, Abraham: Medical Education in Europe, New York, 1912, p. 96

RECOMMENDATIONS

The small number of autopsies performed in our hospitals despite the efforts made by many of them to obtain permissions for performing them, proves very forcibly that some changes in the public mind and in the existing laws must be brought about in order that medical education and medical progress in this country may not be seriously hampered.

The committee would therefore *recommend:*

1. That effort be made on the part of various medical bodies to interest the press in the matter of autopsies with a view of presenting to the public the absolute dependence of medical progress and education on the regular performance of post-mortem examinations.
2. That effort be made to secure *legislation relative to* autopsies, similar to that of European countries, which would obviate the necessity of securing written permissions and at the same time safeguard all the present rights of the relatives.
3. That the law should be so amended as to recognize the difference between anatomic dissection and pathologic autopsy made for scientific purposes.
4. That until such legislation is secured, the boards of managers of all our private hospitals be urged to have the hospital rules so changed as to remove as much as possible the obstacles now placed in the way of securing autopsies.

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS[*]

(Continued from page 1705)

VII

DANGEROUS RECOMMENDATIONS

From the point of view of actual menace to life, the most hazardous advice is that which encourages the physician to rely on bacterial vaccines in certain acute localized infections in which operative measures are indicated, as for example in acute appendicitis, cholecystitis and mastoiditis. By specious advertising, or even by direct recommendation the undiscriminating practitioner is allured into relying on inoculations of stock vaccines in these dangerous conditions, with the result that good surgical counsel is not sought, or is sought too late for successful operative intervention.

The situation is almost equally grave in certain septicemic complications in which operative procedures are unavailing, such as puerperal infection. Here the success of immunizing treatment, if success is possible, depends on the prompt identification of the offending bacteria, and the early use of most accurately adjusted doses of the autogenous vaccine. But the physician who accepts the guidance of commercial vaccine institutions will use some one or other of the marketed mixed vaccines or "bacterial derivatives" advertised as suitable for just such emergencies, and often lose the only possible opportunity to avert a fatal issue.

HARMFUL ADVICE

In subacute and chronic infections the risks of abusing vaccine therapy under the stimulus of misleading advice are not immediate as regards life, but much harm and needless suffering may be caused. This is illustrated by those affections in which mechanical obstacles to recovery exist, which must be removed before a cure can be expected. Urinary calculi, biliary calculi, occluded appendixes, adenoids, pus-tubes, urethral strictures, abscesses requiring drainage, necrotic bone—these are some of the pathologic conditions in which vaccine therapy has been used to the exclusion of the appropriate operative procedures, or even of a correct diagnosis. Also in subacute and chronic infections it has come about that implicit reliance on bacterial vaccines has deprived the patient of appropriate non-operative therapeutic measures, either alone or as accessories.

TECHNICAL OBJECTIONS TO MARKETED STOCK VACCINES

Aside from the faults that accompany misleading therapeutic claims there are a number of valid objections which apply to all commercial bacterial vaccines. These shortcomings may be itemized as follows:

1. *Uncertainty as to Source of Culture.*—Commercial laboratories depend on outside sources for cultures which are obtained from individual clinicians, public clinics or hospitals. Rarely is it possible to learn anything definite as to what complicating factors exist in a given case. Thus a culture may be obtained from a patient afflicted with some concomitant infection whose existence is not clear at the time the culture is secured. A culture of staphylococcus or streptococcus, for instance, may be yielded by the pus from an ulcer which subsequent events will show to have been of syphilitic origin; it may, in fact, be a chancre before the secondary manifestations. It has actually happened in the practice of vaccine therapy that the material from which the vaccine was prepared was contaminated with the virus of syphilis, but luckily the vaccines were of the autogenous variety and inoculated only into the patient with the mixed pyogenic-syphilitic infection. It is altogether likely that the syphilitic virus was killed by the heat used in sterilizing the vaccine, and while the transmission of syphilis in this way is almost inconceivable, it illustrates the importance of investigating carefully the source of stock vaccines. No physician would care to subject himself to the criticism of having used such a vaccine. Other mixed pyogenic and chronic granulomatous infections like tuberculosis, glanders, actinomycosis and blastomycosis, and mixed pyogenic infections in which resistant spore-bearing anaerobes like tetanus and malignant edema occur, might be cited to emphasize further dangers.

2. *Uncertain Age of Culture.*—Just how long a given culture of pathogenic bacteria will retain its specific immunizing property, or when this property is lost under subcultivation, have never been definitely ascertained. The biologic characteristics of bacteria alter more or less rapidly under artificial environment, and since virulence is often rapidly lost, it is probable that antigenic potency is similarly precarious. The older the culture the less reliable it is likely to be.

3. *Uncertain Potency-Period of Market Vaccines and Suspensions.*—The unknown influence of time also applies to the therapeutic potency of ready-prepared vaccines and suspensions, a fact abundantly testified by clinical experience. This loss of therapeutic effectiveness as shown by clinical trials varies widely according to age, storage-temperature, and composition of different vaccines. This is the experience of bacterio-therapeutists who prepare their own vaccines and who employ mostly those of the personal or autogenous variety. Consequently this element of uncertainty must be magnified both in market vaccines and in the stock suspensions from which they are prepared. But with the purchased

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[*] This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

vaccines the physician is helpless to remedy the fault if, indeed, he is able to detect it.

4. *Possibility of Dangerous Contaminations.*—The risk of accidental contamination of the vaccine during or after preparation has been strongly emphasized by several eminent bacteriologists. The danger of contamination from street dust which may contain tetanus germs demands constant care. Accidents such as these can of course occur to the private practitioner of vaccine therapy who makes and uses his own vaccines. Their occurrence should at all times be kept in mind and every precaution taken both to safeguard against them, and to have the protection of all possible skill and experience to offset the criticism such an accident would entail. Naturally the opportunities for such disasters are multiplied in marketed vaccines, especially in those laboratories in which much routine work is delegated to unprofessional assistants, or those in which the actual work of preparation is entrusted to persons inadequately trained in bacteriology. Unfortunately the responsibility of accidents from commercial vaccines rests on the physician administering them, and not, as it properly should, on the manufacturer.

5. *Uncertainty as to Dosage.*—As already remarked, dosage is one of the fundamental factors of success in vaccine therapy. Inflexibility in dosage is one of the serious faults incidental to the use of commercial bacterial vaccines as at present supplied. A single dose in a single container may be too large or too small to meet the requirements of a given case. The extensive latitude which appertains to the therapeutic dose of bacterial vaccines is left entirely to the resources of the physician without supplying him with the means of meeting these extremes. Attempts to remedy these defects have been made by furnishing certain vaccines in graduated containers with what is presumed to be a maximum dose, fractions of which are supposed to be withdrawn at discretion. Another device for meeting the defects in dosage is offered by a set of bulbs with varying quantities of bacteria, the plan being to increase the doses serially, doubtless with the hope that some will be found adequate. As pointed out under the discussion of dosage, these expedients are to be avoided; and they impress the fact that dosage in commercial vaccines is by no means adequately provided for.

6. *Vaccines of Questionable Identity.*—Among the well-known bacterial species the question of identity of those composing a commercial vaccine need cause little concern. But with the rarer bacterial species serious mistakes in identification have been made. For instance, a commercial vaccine supposed to be of gonococcus proved to be derived from a small diphtheroid bacillus. The acne bacillus has also been incorrectly diagnosed. A vaccine marketed and advertised for pertussis was found to have as its source a culture of a bacterium growing readily on ordinary culture mediums; thereby differing widely from the bacillus of pertussis which grows so scantily. This organism failed to qualify in any of the special features characteristic of the whooping-cough bacillus of Bordet-Gengou. It is highly probable that critical analysis will disclose many shortcomings in commercial vaccines purporting to contain the more uncommon bacterial species.

7. *Complicated and Expensive Containers.*—A variety of packages for distributing separate doses of vaccine have been employed by manufacturers, some using a minute glass bulb, bottle or ampule, while others have introduced the syringe-container—that contrivance whose original adoption arose solely through competition in the marketing of therapeutic serums. No competent practitioner needs such artifices as these to perform a proper inoculation, and he should discourage their manufacture and sale by insisting on simple and inexpensive containers for serums and vaccines.

(*To be continued*)

New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association. Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council. Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies."

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that, so far as known, it complies with *the rules adopted by the* Council.

W. A. Puckner, Secretary.

MAGNESIUM PERHYDROL.—A name applied to magnesium peroxid (for properties, actions and uses see New and Nonofficial Remedies, 1913, p. 185).

Manufactured by E. Merck, Darmstadt, Germany (Merck and Co., New York). German patents Nos. 141,821 and 171,372. No. U. S. patent. U. S. trademark No. 44,147.

MAGNESIUM PERHYDROL, 25%.—Magnesium perhydrol, 25%, is a mixture consisting essentially of magnesium peroxide and magnesium oxide with water of hydration, containing not less than 25% of magnesium peroxide (MgO_2).

It responds to the tests of identity and purity given for magnesium peroxide. The titration with potassium permanganate described under magnesium peroxide should indicate not less than 25 per cent. of magnesium peroxide MgO_2.

Manufactured by E. Merck, Darmstadt, Germany (Merck and Co., New York). German patents Nos. *141,821 and 171,372.* No U. S. patent. U. S. trademark No. 44,147.

Magnesium Perhydrol, 25 %, Tablets, 7½ grs.—Each tablet contains magnesium perhydrol, 25%, 0.5 Gm. (7½ grains).

LUMINAL—(For properties, actions and uses see N. N. R., Jour. A. M. A., May 17, 1913, p. 1541).

Manufactured by Farbenfabriken vorm. Friedr. Bayer and Co., Leverkusen, Germany (Farbenfabriken of Elberfeld Co., New York).

Luminal Tablets 1½ grs.—Each tablet contains luminal 0.1 Gm. (1½ grains).

Prepared by Farbenfabriken vorm. Friedr. Bayer and Co., Leverkusen, Germany (Farbenfabriken of Elberfeld Co., New York).

Luminal Tablets, 5 grs.—Each tablet contains luminal 0.3 Gm. (5 grains).

Prepared by Farbenfabriken vorm. Friedr. Bayer and Co., Leverkusen, Germany (Farbenfabriken of Elberfeld Co., New York).

LUMINAL-SODIUM.—(For properties, actions and uses see N. N. R., Jour. A. M. A., May 17, 1913, p. 1541).

Manufactured by Farbenfabriken vorm. Friedr. Bayer and Co., Leverkusen, Germany (Farbenfabriken of Elberfeld Co., New York).

Therapeutics

PRESCRIPTION NONSENSE

In the following prescriptions it is not intended to comment on every discoverable mistake; our remarks are especially directed at the use of such multiple combinations. The following has been proposed and printed as a treatment for bronchial pneumonia in a child 3 years of age, one teaspoonful being given in water every three hours:

R	Ammon. carb.	gr. xlv
	Mucil. acaciae	
	Syrupi simplicis ...... āā	℥ ss
	Tinct. lavandulae-comp.	ʒ ii
	Aquae ...... q. s. ad	℥iv

In the tincture of lavender are:
Oil of lavender flowers
Oil of rosemary
Saigon cinnamon
Cloves
Nutmeg
Red Saunders
Alcohol
Water

In the first place, the primary thought should always be not to give the patient anything that will cause nausea and vomiting. This is particularly true with babies and children. Ammonium carbonate is always irritant. As an expectorant it has absolutely no advantage over ammonium chlorid, and as a cardiac stimulant is more or less of a failure. Ammonium carbonate can stimulate the heart or raise the blood-pressure only by irritating the throat, gullet and stomach, much as does the first irritation of whisky. In causing this irritation it very frequently causes vomiting. The irritation from the ammonium carbonate is covered up, in the above prescription, by the mucilage of acacia and the syrup. Therefore, as a cardiac stimulant it would be an utter failure. It might cause nausea. As an expectorant it is inferior to ammonium chlorid.

A sick child should not receive a lot of syrup and sticky mucilage. Very many times we prevent a child from receiving sweets and then give him sugar in some form in his medicine.

Some would criticize the use of the compound tincture of lavender on the ground that it is unnecessary and disturbing to give the young child these spices. Of course the 2 fluidrams in a 4-ounce mixture represents so little (a teaspoonful, approximately 5 c.c., representing about one-third of a cubic centimeter or 5 minims of this compound tincture of lavender), that it makes the addition nothing but a dash of cocktail for the baby.

As a whole, the prescription is bad. If an expectorant is needed, the required amount of ammonium chlorid, given in syrup of citric acid and water, which may be administered in a little lemonade or orangeade, will do the work, will not disturb the stomach, and will be perfectly palatable.

The following has been recommended and printed for bronchial pneumonia in which there is respiratory failure:

℞	Quin. sulph.	gr. xxiv
	Strych. sulph.	gr. ¼
	Acidi hydrochlor. dil.	♏ xv
	Glycerini	ʒ iii
	Liq. pepsini ...... q. s. ad	℥ iv
M.	Sig.: One teaspoonful in water every three or four hours for a child 5 years of age.	

In the first place, with a very sick child the cerebral irritation from quinin is not advisable, unless it is positively needed. This preparation will be so intensely bitter that a child 5 years old would reject it. Also, it cannot be too many times urged that quinin will inhibit the digestive properties of pepsin preparations, and there is no excuse for administering quinin and strychnin with glycerin, pepsin and dilute hydrochloric acid.

If the stimulation from strychnin is required, the rapidity with which it would be absorbed, in this mixture, is so uncertain that with "respiratory failure" its value would be doubtful. If strychnin is required for a young child (and the necessity for its administration does not often occur) it would be better to administer it hypodermically, if positively needed. If given by the mouth, a teaspoonful of a solution of strychnin sulphate in water, in the required dose, might be given in orangeade or better, in a small cup of chocolate. As just stated, the nervous stimulating effect of strychnin and quinin are rarely desired in a seriously sick child, but if the indication for strychnin is positively present, it should be given in a way that the child will surely get it, and get it in a short time.

The following prescription has been recommended and printed for the same condition as the above, namely, respiratory failure in a child who has bronchial pneumonia:

℞	Strych. sulph.	gr. ¼
	Acidi hydrochlor. dil.	ʒ i
	Spts. chloroformi	ʒ iv
	Ext. cinchonae liq.	ʒ iii
	Aquae ...... q. s. ad	℥ iv
M.	Ft. mistura.	
	Sig.: One teaspoonful for a child 5 years of age, every three or four hours.	

The preceding discussion in relation to the administration of strychnin holds true with this prescription. The object of the dilute hydrochloric acid in it is difficult to discover.

The fluidextract of cinchona is an absurd ingredient, intensely disagreeable to take, and is a more unnecessary ingredient than the quinin in the above prescription, as the quinin was administered with a definite object, although we cannot approve of that object in this case. The fluidextract of cinchona should probably never be ordered.

The spirits of chloroform is irritant, and would be very disagreeable for a child to take. As a matter of fact the prescription would be intensely disagreeable, if not nauseating. Its perpetration is inexcusable, and a child would doubtless vomit it.

The following prescription, written by a physician and sent to a drug-store, is a good example of inexcusable prescription absurdity:

℞	Bism. subnit.	ʒ iii
	Calomel	gr. xii
	Ex. belladonnae	gr. ii
	Codeia	gr. v
	Ex. hyoscyami	gr. v
	Pulv. arom.	ʒ ss
	Pul. fennel	℈ ii
	Sodii bicarb.	℈ ii
	Pepsin	ʒ ss
M.	et ft. chart. No. x.	
	Sig.: One q. 3 h.	

In the first place, a cathartic (calomel) is entirely out of place in a stomach sedative mixture containing bismuth, codein, belladonna and hyoscyamus. There is no real excuse for combining belladonna and hyoscyamus The action of both is practically that of atropin.

The combination of bicarbonate of soda with pepsin is of course a chemical mistake, as the alkali would inhibit the activity of the pepsin.

Why the powdered fennel is added to the aromatic powder it is difficult to understand.

The pharmacologic, chemical and pharmacal mistakes in the above prescription are absolutely inexcusable.

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THE SMALLEST LUNG CAPACITY COMPATIBLE WITH LIFE

It is beginning to be appreciated that many of the organs of the body which are indispensable for life have a functional capacity far greater than that which they are called on to exhibit under the ordinary conditions of existence. This excess of available physiologic power above what is commonly called into play has happily been termed by a well-known American physiologist the "factor of safety." Two kidneys, for example, are available to perform the task which one can ordinarily execute satisfactorily; other glands are similarly duplicated in excess of what is necessary to accomplish the purposes for which they were intended.

In the case of the lungs this surfeit of tissue is perhaps less obvious on first consideration, because we are accustomed to rate the pulmonary needs of the body at a high figure. Nevertheless, it is well known that life may still continue, even though no inconsiderable part of the lungs be destroyed. In pneumonia, for example, sufficient pulmonary ventilation can proceed without ultimate detriment for some time, even when one lung has become entirely consolidated. Comparable conditions are occasionally brought about by purely mechanical interference with pulmonary ventilation. Physiologic literature records numerous experiments in which the lung capacity has been reduced at least one half, and Courmont has recorded the possibility of continuing respiration after destruction of three quarters of the lungs.[1] Now we are informed through the investigations at the Laennec Hospital[2] in Paris, that the reduction of the lungs to even one sixth of their ordinary capacity is not incompatible with the continuation of life. The method adopted by these French investigators to accomplish the reduction of the lung capacity is of interest, inasmuch as it was suggested by a procedure which has had some application in human therapy. They produced an artificial pneumothorax, such as has been made in human patients, by the introduction of inert nitrogen gas into the chest. The surprising result recorded encourages the belief that a total collapse of one lung may be produced without permanent detriment, even if the other lung be partly affected by previous disease.

The comparative innocuousness of a unilateral pneumothorax has been appreciated for some time. These experiments not only serve to explain certain cases of striking survival after pathologic interference with respiration, but also render less ominous the much-discussed procedures for rendering immobile considerable portions of the lungs in man. The margin of safety, long appreciated as the result of clinical experiments to be considerable, has thus been extended beyond the most generous allowances heretofore assumed possible.

REGULATION OF THE HEAT OF THE BODY IN HOT CLIMATES

In all temperate climates and, if certain exceptional cases are noted, in almost all climates in which mankind is engaged in the usual activities of life, the temperature of the human body is higher than that of the environment, so that there is a tendency toward continuous loss of heat from the surface of the body. Except in so far as it is prevented by the insulating devices of clothing, this loss takes place in part by convection, that is, by warming the layers of air in contact with the body, as well as by radiation whereby there is an exchange of heat between the surface of the body and that of surrounding cooler objects. When there is occasion for the removal of a larger amount of heat, this is accomplished through the function of perspiration. In the evaporation of sweat a large amount of heat becomes latent and is removed from the body. The chief factor which may interfere with this procedure is the impeding of the evaporation by the presence of an atmosphere already saturated with water vapor so that the sweat can no longer be converted into the gaseous phase.

Few persons realize that there are, nevertheless, inhabited regions in which the temperature of the surrounding air is not lower than that of the body. In parts of India, for example, during the hot weather in March, April and May, the maximum temperature is daily seldom under 38 C. (100.4 F.), and in some places it rises to over 43 C. (109.4 F.) for long periods. Usually such habitable areas experience a very low percentage of moisture in the air. Wet heat is not usual, since with the rains the weather becomes cool.

It is well known that the body temperature can be maintained at its normal height in an atmosphere much higher than 37 C. (98.6 F.), in spite of the fact that the production of heat is still going on in the organism. It is said that a man can stand exposure to a temperature of 90 C. (194 F.) or even 120 C. (248 F.) for a considerable time provided that the air is dry. If the outside temperature be above that of the body, heat is actually added instead of lost; and this additional heat is greatly increased by exposure to a very hot sun or wind. Inasmuch as radiation and conduction are available as cooling agencies only when the outside temperature is below that of the body, it is a matter of no little moment to understand what the organism is called on to do in order to prevent any marked rise of internal temperature. That an adjustment does take place is assured from the fact that during extremes of dry heat no great discomfort is felt by healthy persons; and it is stated on good authority that fairly hard physical work is possible in the sun, even with a "shade" temperature of 43 C. (110 F.) or more. Here the organism must depend solely on evaporation as a cooling agent; and this function must be sufficient to remove all the heat added from external sources as well as the heat due to internal metabolism. In a Turkish bath the loss of weight, represented almost entirely by water, may be at the rate of two pounds per hour.

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[1] Courmont, J.: Sur la pneumectomie expérimentale avec survie prolongée, Compt. rend. Soc. de biol., 1912, Nov. 23.

[2] Bernard L.; LePlay, A., and Mantoux, C.: Capacité pulmonaire minima compatible avec la vie, Jour. de physiol. expér., 1913, xv, 16.

Dr. E. H. Hunt, medical officer to the N. G. S. Railway, who resides in Deccan, India, where extremes of heat like those mentioned prevail, has furnished interesting data as to how one becomes adjusted to the physiologic and hygienic conditions thus created.[1] The heat contributed by the combustion of the ordinary food-supply sufficient to maintain nutritive equilibrium may be judged from its fuel value. If this is put at 3,500 calories for an active working man, a calculation shows that the amount of water the evaporation of which will absorb this heat at body temperature is 6 liters (about 6 quarts). Water must therefore be taken into the body in food and drink to supply this requirement in addition to what is lost by the urine and feces, is wasted by inefficient perspiration, or is needed to remove the heat actually added to the body from without, in the hot climates referred to.

Such hypothetical estimates have been compared by Dr. Hunt in India with actual observations made during an exceedingly hot and very dry period when, for some hours at midday, the lowest temperature which could be secured in tents under trees was 42.8 C. (109 F). All dry objects were as hot as this or hotter, and were uncomfortable to handle. The mercury in the thermometer fell at once when a hand was placed near it, or if it were breathed on. Until about midday the party of investigated healthy Europeans remained in the sun with no shade whatever, a considerable amount of physical exercise being taken. Such a life, we are told, is led by hundreds of Europeans in India, customarily with a gain rather than a loss of health. When health suffers it is usually through the incidence of infectious disease. None of the party, using strict moderation, consumed less than three gallons of liquid per day. Even with this the flow of urine was by no means free. When the activity and considerable exposure to the extremes of heat are taken into account in this experience, which probably represents an approach to the limit of comfort, the fluid intake is not far removed from the hypothetical estimate.

It is obvious that in such extremes of dry heat any failure of perspiration must lead to instant and grave risk. This failure may result from an insufficiency of drinking-water. It may equally result, as Dr. Hunt maintains, from pathologic processes incident to slight malaria, early typhoid, or any other process by which heat regulation is upset. He adds that he has not come across any case of pure "heat-stroke" or sunstroke in a proved healthy person. A man might suffer from but slight fever while indoors and might be unaware that he was ill; yet his whole regulation might completely fail if he were at work in the sun under conditions which involve an extreme effort even for the healthiest.

The main regulation of heat loss takes place by the control of the nervous system over the cutaneous circulation and the sweat-glands. When this fails, the temperature must speedily rise above the normal in these hot climates. General excitability is evinced and metabolism is stimulated so that a "vicious circle" is established. There is not even any compensation by lessened heat production. In "wet heat" the limit of safety is speedily reached. When the air is already more or less saturated with moisture, as indicated by high wet-bulb thermometer readings, evaporation is slow and inefficient, and danger ensues even during rest. The excess of sweat secreted and any increase in the amount of water consumed under such conditions merely increase discomfort rather than facilitate heat regulation.

The large amount of water absolutely required and actually consumed by men in these hot climates has not been appreciated adequately in any quantitative sense. Experiments by Hunt have demonstrated that a healthy man carries in his body a large reserve of water mainly stored in muscle and so readily available that the percentage of water in the blood is not appreciably diminished even when several liters of water have been lost by sweating. If, however, it is extensively drawn on, replacement seems to occupy many hours, and this delay is an important factor, forming a strong argument against any restriction of drinking which would cause undue or needless use of the stored water of the body.

"BOB VEAL"

It is well known that the sale of the flesh of very young calves is prohibited by law. Up to 1906 the federal government fixed the age limit at four weeks; in that year it was reduced to three weeks, at which point it still remains. There is an unfortunate lack of uniformity in the laws of different states. New Jersey and Pennsylvania have adopted the three weeks' age minimum, but the majority of states and cities maintain a limit higher than that placed by the federal government, and Arkansas and Missouri prescribe an age limit of six weeks.

The most accurate method of determining the age of a calf seems to be by the appearance of the umbilical cord. In healthy calves the cord disappears within two weeks. Guesses as to the age of a carcass based on the appearance and condition of the fat, on the appearance and eruption of the teeth, on the ossification of the bones, on the condition of the arched pad on the hoof and similar characters may be wide of the mark. Even careful histologic examination of the tissues by Moore and Gage has shown no difference that can be relied on to separate animals one week old from those that are six weeks old.

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[1] Hunt, E. H.: The Regulation of Body Temperature in Extremes of Dry Heat, Jour. Hyg., 1912, xii, 479.

The sale of "bob veal" is forbidden presumably either on the ground of its unwholesomeness or for esthetic reasons, or both. It is a curious fact, as we have already pointed out,[1] that the evidence for the harmfulness of bob veal is of the slightest. Some at least of the cases of illness—not very numerous—attributed to the use of bob veal have been due to specific infection or to contamination after sale and not to the immaturity of the veal in itself. In the experiment recently conducted by Fish[2] bob veal was eaten by twenty persons of various ages. and no injurious effect was observed, not even the "laxative effect" ascribed to bob veal by some writers. The question whether or not immature calves are more likely to be specifically diseased than calves over three weeks old is one on which there seems to be some difference of opinion,[3] but it would seem to be capable of ready solution if a sufficient number of well-controlled observations could be assembled. As the case stands, veal from animals two or three weeks old appears to be no more unwholesome than that from calves over three weeks. Further experiments and observations, however, seem desirable.

On the esthetic side legislation is plainly beset with difficulties. Repugnance to the meat of very young animals may or may not be justified. To some people the sight of raw oysters is unpleasant and the swallowing of raw oysters an impossible feat. Fastidiousness with regard to certain articles of diet is not universal. In some parts of Germany the sale of calves' flesh is permitted from eight to ten days after the birth of the animal, and such meat, which would be condemned throughout the United States, finds ready purchasers.

On the economic side it has been urged by Fish and others that a lower limit should be placed as the permissible age for the sale of veal. "The honest farmer who carries on intensive dairying and does not find it profitable to raise all of his calves to maturity must suffer considerable loss. The skin of the calf may perhaps be sold for a dollar or less, but the law prohibits the sale of the carcass for food purposes. Naturally, the farmer infers that the flesh is unwholesome. If the butcher may not be allowed to sell it to the public to eat, the farmer and his family are not likely to consider it a proper food for themselves. The result is that the carcass possessing a certain nutritive value, as far as proteins are concerned, is thrown away or cooked up and served to the swine or poultry for food."

While public health interests must be held paramount to all other considerations, it must be admitted that the unwholesomeness of much of what is now condemned as bob veal needs confirmation. Whatever our prejudices, whatever the traditions of our country or race, we must keep our minds open to new evidence. If through ignorance we have been destroying good and wholesome food, let us recognize the fact and mend our ways. At all events, the matter is sufficiently important from several points of view to require immediate, although thorough and careful, investigation.

VACCINATION FOR AUTUMNAL HAY-FEVER

Dunbar, who was the first to demonstrate that the European or spring variety of hay-fever is caused by the pollen of timothy and other members of the grass family, found that an aqueous extract of the pollen produced congestion and intense irritation when introduced into the eye of a susceptible person. Normal persons are entirely unaffected by such a procedure. Clowes,[1] of the State Institute for the Study of Malignant Disease, at Buffalo, has now observed that sufferers from the American or autumnal form of hay-fever (caused by the pollen of ragweed, goldenrod and other members of the family of the *Compositae*) exhibit a similar sensitiveness when tested with aqueous extracts of ragweed pollen. This reaction is also strictly specific, and only those who suffer from both spring and autumnal hay-fever react to the extracts obtained from both varieties of pollen. The amount of pollen extract required to produce congestion in the eyes of sensitive individuals varies from 0.05 c.c. of a solution of 1 : 500,000 to 0.05 c.c. of a solution of 1 : 500. This test can be utilized quantitatively, and affords a fair index of the measure of immunity or resistance possessed by sensitized persons. Clowes states that a specific cutaneous reaction capable of quantitative application may be obtained by making a slight abrasion of the skin and applying a drop of pollen extract of suitable concentration. A large white welt similar to that resulting from a mosquito-bite or bee-sting accompanied by a distinct itching sensation develops on susceptible persons within fifteen minutes, while normal controls are unaffected. A small dose of pollen extract (1 c.c. of a 1 : 1,000,000 solution for example), injected subcutaneously, produces in highly sensitized persons an itching or prickly sensation followed immediately by considerable swelling at the point of injection and redness extending sometimes over an area of several inches. The injection of a somewhat larger dose (1 c.c. of a 1 : 50,000 solution) caused a considerable swelling and pain, and small blisters resembling hives developed at the point of injection. This was followed by dizziness and a sense of general discomfort, and a slight attack of hay-fever was precipitated.

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[1] Is "Bob Veal" Toxic? editorial, The Journal A. M. A., March 15, 1913, p. 834.

[2] Fish: Am. Vet. Rev., 1912, xli, 178.

[3] Proc. Am. Vet. Med. Assn., 1912.

[1] Clowes, G. H. A.: A Preliminary Communication on Certain Specific Reactions Exhibited by Hay-Fever Cases, Proc. Soc. Exper. Biol. and Med., 1913, x, 69.

An attempt has been made in the Buffalo laboratory[2] to produce immunity against American autumnal hay-fever by vaccination. The extracts employed by Clowes were prepared from the pollen of ragweed by one of the following two procedures: (1) that previously employed by Dunbar, consisting of repeated freezing and thawing in a 5 per cent. aqueous suspension, and (2) an original method, which consists of precipitating the pollen with acetone and extracting with water.

After Dunbar's first attempts to produce active immunization against hay-fever by vaccination with aqueous pollen extract, he abandoned this direct process because of the anaphylactic symptoms obtained, and subsequently resorted to passive procedures. The number of observations by Clowes is still rather too small to permit of broad generalization or final pronouncements. As an index of promise we may quote his statement that all the eight patients treated experienced marked alleviation of general symptoms corresponding very closely with the physical tests.

Specific precipitin and complement-deviation reactions with pollen extracts as antigens were exhibited by certain patients before the commencement of the hay-fever season. These reactions disappeared under treatment, reappearing a few weeks later. There is enough of an encouraging outlook to warrant further investigation. The dosage of the extracts must be regulated with great care, since they are not entirely devoid of dangerous possibilities. The uninitiated need to be warned against any overhasty procedure where so much uncertainty remains.

SOLVING THE MYSTERIES OF TROPICAL DISEASES

Gangosa is a mysterious[3] disease of Guam, which produces serious disfigurement of the nose and adjoining regions of the face. It has sometimes been called rhinopharyngitis mutilans, since the mutilating lesions seemed in most cases to start at the back of the nose or in the soft palate. Mink and McLean[4] described and illustrated this disease in THE JOURNAL in 1906. In a recent number of the *United States Naval Medical Bulletin* — a periodical published for the information of the medical department of the Navy—Kerr[5] discusses the subject further. When an American naval vessel touched at the island about forty years ago, the naval surgeon who saw a number of cases of the disease thought it probably of syphilitic character; but the therapeutic test apparently did not confirm this and the diagnosis was abandoned.

The disease, which was apparently contagious, was common and increasing; the segregation of affected patients therefore seemed wise. A location next to the leper colony was picked out and all the patients, of whom there were several hundred, sent there. After careful and persistent observation and treatment the problem of the character of the disease has been solved. The lesions yield slowly but surely to antisyphilitic treatment when it is given freely and kept up for a long time. The experience should prove of value in the treatment of other refractory syphilids. Ignorant patients cannot be trusted to administer the treatment themselves because they are apt to stop taking it on account of its unpleasantness when they do not see prompt signs of improvement.

Each inmate of the gangosa colony at Ypao was given a mixture containing 15 grains of potassium iodid and 1/15 grain of mercuric chlorid three times a day. This dose was soon increased to two or three times the original amounts according to the age and strength of the patient. After a few months all began to improve. At the end of eight months all active manifestations had subsided. There were some relapses, but these occurred only in patients who neglected to take their medicine regularly; after the imposition of a fine of 25 cents for each dose missed, all recovered promptly once more.

In the meantime in many cases the Wassermann test was found positive and the histories became clearer. Some of the patients were found to have suffered from frambesia in earlier life. This is another of these Pacific Island diseases that has been identified with syphilis and in which a positive Wassermann is found. The results reported by Reed[6] leave no doubt on this subject. The use of salvarsan was found to hasten the cures materially, though the continuance of the mixed treatment and especially of the mercury has been deemed necessary to provide against relapses.

Many of the supposedly tropical diseases, affections thought to be due to the hot, moist climates in which these people live, are turning out to be not mysterious results of climatic conditions, but the consequences of much more concrete and preventable agencies. Syphilis and the animal parasites, the mosquito, the tsetse fly, the filaria and the hookworm account for most of them; thus the problem of prophylaxis becomes much simpler.

It is announced through the United States Public Health Service[7] that there is a gradual reduction of the number of lepers in Hawaii so that the total number of cases is now much below what it was a few years ago. The care given lepers in the leper colony is so satisfactory that a patient pronounced cured and authorized to leave the settlement sometimes asks to be allowed to remain. These instances from Guam and Hawaii show what our government is accomplishing for the dependent peoples. In many ways, but particularly in all that concerns the health of the natives, the assumption of authority over them by the United States has been a great blessing. It has saved much in suffering and disease, and there is no doubt that the prospect for the future is even brighter; for it is above all in prophylaxis, now so well understood, that modern sanitary science can accomplish its greatest results.

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[2] Clowes, G. H. A.: A Preliminary Communication on the Treatment of Autumnal Hay-Fever by Vaccination with an Aqueous Extract of the Pollen of Ragweed, Proc. Soc. Exper. Biol. and Med., 1913, x. 70.

[3] Gangosa is probably the "unknown disease" described by Senn, Nicholas: Travel Notes from South America, THE JOURNAL A. M. A., Jan. 11, 1908, p. 116, cited in the editorial Gangosa, THE JOURNAL A. M. A., Feb. 8, 1908, p. 455.

[4] Mink, O. J., and McLean, N. T.: Gangosa, THE JOURNAL A. M. A., Oct. 13, 1906, p. 1166.

[5] Kerr, W. M.: Gangosa, U. S. Naval Med. Bull., April, 1913, p. 188.

[6] Reed, E. U.: Treatment of Frambesia with Salvarsan. U. S. Naval Med. Bull., April, 1913, p. 188.

[7] McCoy, George W.: Care of Lepers in Hawaii, Pub. Health Rep., April 18, 1913, p. 726.

EXPERIMENTAL EOSINOPHILIA

An increase in the number of eosinophilic leukocytes in the circulating blood occurs in certain diseases, notably those associated with intestinal parasites, and in parasitic diseases of the skin, bronchial asthma, myeloid leukemia and some postfebrile conditions. The cause for this increase and the function of the eosinophil cells are little understood, and the views advanced to account for them have been largely without experimental basis. Recently the production of eosinophilia in animals has brought out some interesting observations. The occurrence of eosinophilia has been noted following the introduction of a foreign protein into a previously sensitized animal. Ahl and Schittenhelm,[1] in experiments in which guinea-pigs were injected with a series of protein substances, found that the resulting reaction was associated with varying degrees of eosinophilia. For example, animals sensitized to albumin, fibrin and globin, when reinjected respectively with these, showed some eosinophilia. Nucleoprotein, histon and caviar peptone gave high eosinophilia, while other protein end-products, as nucleic acid and protamin, gave almost no increase in eosinophils. These investigators conclude that there is a marked difference in the ability of different protein products to produce eosinophilia, and suggest that this property belongs only to a class of substances with a certain distinctive chemical structure, and that anaphylaxis is not due to a certain, definite, single poison, but to a group of chemically related substances.

Goldschmidt observed that laboratory workers, in dissecting the intestinal parasite *Ascaris,* frequently have attacks of conjunctivitis, coryza, sneezing, cough and asthmatic seizures, and that these attacks increase in severity on repeated contact with the material. These manifestations are accompanied by eosinophilia, and naturally would be explained as anaphylactic phenomena. Opie found that in guinea-pigs eosinophilia follows infection with *Trichinella spiralis,* being marked in cases of mild or medium nature, while in severe and fatal cases the increase is slight, and may be entirely absent. These observations suggest the possibility that the function of the eosinophils is protective and that they are associated with resistance to specific toxins. The fact that eosinophils are often localized in the neighborhood of the foreign protein lends color to this view.

Herrick[2] gives the result of a series of experiments in which he sensitized guinea-pigs with an extract of the bodies of roundworms *(Ascaris lumbricoides).* When the injections were made at short intervals, as on consecutive or alternate days, no eosinophilia or other special manifestations resulted; but when the injections were made at intervals of from five to twenty-five days there was marked eosinophilia. In no instance did eosinophilia result from a single injection, and in some instances death from acute shock followed the subsequent injections. He found that when the extract was rendered protein-free by precipitation and filtration, no eosinophilia resulted from the introduction of it into previously sensitized guinea-pigs. From these observations he concludes that the substance producing the eosinophilia is a protein, and that experimental eosinophilia is closely connected with anaphylaxis and indicates previous sensitization.

In view of these experiments the occurrence of eosinophilia in bronchial asthma lends additional support to the view now growing in favor, that asthma is an anaphylactic manifestation. There is a tendency to regard other diseases accompanied by eosinophilia in the same light. Evidently this field of investigation is only barely opened, and much remains to be done before the exact relations of eosinophilia and other symptoms of intoxication with protein-split products can be determined.

ENDEMIC GOITER AND RADIO-ACTIVITY

In a recent Bavarian report on the endemic distribution of goiter[3] the conclusion was reached that geologic formation is not the determining or primary factor. The belief was further ventured that the etiologic agent is to be sought in water, which may, of course, be indirectly modified by rock and soil condition. It is said that no less than fifty causes for the occurrence of endemic goiter have been proposed in the literature of medicine. One by one they have been subjected to critical examination and rejected as inadequate or retained for further evidence. Accordingly, from time to time we have referred to the topic,[4] which unquestionably deserves the serious consideration of scientific investigators.

Among the more recent suggestions, radium and radio-active waters aroused consideration as possible etiologic factors in the genesis of goiter several years ago. Répin[3] demonstrated that a number of well-known goiter-producing waters of Savoy exhibit radio-activity. There is much in his report that contradicts the direct causal relation between the disease and the radium emanation. Nevertheless the novelty of the subject and the presumable physiologic potency of radio-active substances have kept attention centered more or less on the possibility involved, though it can scarcely be regarded as one of the more widely debated theories of the causation of goiter.

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[1] Ahl and Schittenhelm: Ztschr. f. ges exper. Med., 1913, i, 111.

[2] Herrick, W. W.: Experimental Eosinophilia with an Extract of an Animal Parasite, Arch. Int. Med., February, 1913, p. 165.

[3] Schittenhelm, A., and Weichardt, W.: Der endemische Kropf mit besonderer Berücksichtigung des Vorkommens im Königreich Bayern, J. Springer, Berlin, 1912. See Endemic Goiter, editorial, THE JOURNAL A. M. A., March 8, 1913, p. 751.

[4] McCarrison's Researches on Goiter, editorial, THE JOURNAL A. M. A., Aug. 10, 1912, p. 449; Endemic Goiter, editorial, ibid., March 8, 1913, p. 751.

Meanwhile data regarding the distribution of radio-active minerals throughout the world are increasing rapidly. Dr. Hesse of the royal Saxon army has collected the facts and attempted to correlate them with the known incidence of goiter.[4] Inquiry has elicited the fact that goiter is not observed in undue frequency among the chemists who are accustomed to work with the radium minerals and are exposed to atmospheres doubtless charged with quantities of emanation exceeding the therapeutic dosage thousands of times. Attendants and patients at the establishments for radium therapy, such as exist at St. Joachimsthal, do not develop goiter. On the contrary, disappearance of thyroid enlargement has even been reported. Miners particularly exposed to air laden with emanation show no excessive incidence of goiter. To all these suggestive facts may be added the failure of a parallelism between morbidity from goiter and radio-activity of the local water-supplies to manifest itself. This is brought out in an investigation of more than sixty localities by Hesse. There are goiter regions in which no radio-active waters occur. Whatever the relation of water and air may be to goiter, the causal factor must be sought in something other than their radio-active properties. If the etiology of the disease is not elucidated by this statement, at any rate radium is relieved of another of the numerous responsibilities which have so precipitately been thrown on this unique element.

Current Comment

HUMAN INDIFFERENCE AND INDUSTRIAL HYGIENE

In a protest against what he terms sensational statements that have lately appeared in the press concerning the poisonous effects of certain trades on workmen, a well-known writer on the chemistry of paints, Mr. Maximilian Toch,[1] refers to a feature which might appropriately be emphasized in relation to most of the larger industries dependent on dangerous processes. This factor is the element of indifference and carelessness on the part of the workmen themselves. The necessity of manufacturing and transporting hazardous materials is an inevitable accompaniment of modern progress. Unquestionably every safeguard should be taken to avoid the possibility of disaster, every precaution applied to prevent the subtle encroaches of unappreciated danger. But when all of this has been done there remains the irresponsive and irresponsible human individual to contend with. The possibility of hedging him in has its limit. There are occupations and activities which can scarcely be rendered absolutely "fool-proof." The limitations of industrial hygiene are thus frequently found in the man himself rather than his industrial environment. Without denying in the least that lead injected or absorbed into the system in any way is exceedingly harmful, Mr. Toch contends that the precautions taken in the white-lead factories of the United States are so great that the plumbism which does result is to a large extent due to the carelessness of the workers themselves. As an illustration of this contention he asserts that it is an almost impossible task to educate illiterate workmen to understand that they must wash their hands before they eat. It is generally agreed by hygienists that in the lead-working industries bathing facilities and wash-rooms should be at the disposal of the workmen and that they should be forbidden to eat, drink or smoke in the workrooms. Toch states that the government is now distributing circulars printed in various languages notifying workmen that it is illegal for an employer or an employee to permit food to be consumed where white-lead materials are manufactured. The ignorance and indifference of man himself still remain as two of the most formidable barriers to the ideal success of modern preventive medicine and hygienic endeavors.

FUNCTIONAL HEART-BLOCK

The faulty correlation of the beat of the auricle and ventricle, spoken of as heart-block, is commonly assumed to be due to an organic defect or injury in some portion of the cardiac tissue in which the beat is initiated and the impulse conducted from part to part. Lately instances of possible functional heart-block, that is, the phenomena of the Stokes-Adams syndrome without actual anatomic defects in the auriculoventricular system to account for the complete dissociation between the parts of the heart, have been reported. In one observed case,[1] for example, the patient recovered and the relations between auricles and ventricles became normal so that the proof of the real difficulty could not be ascertained. Oppenheimer and Williams[2] have now described a somewhat similar case in which the heart-block symptoms were followed and electrocardiograms obtained at intervals until the death of the patient. During many months of the period of observation the patient had a pronounced Cheyne-Stokes respiration. The details of the ventricular beat as they exhibit themselves on the modern electrocardiographic records show frequent changes. The important finding, however, was the lack of apparent organic lesions when the heart was examined after death. Histologic examination failed to reveal any anatomic defect to account for the block in the auriculonodal junction, the node of Tawara, or the main stem and its branches. The nodal artery was sclerotic. It is unusual to miss structural defects when they are supposed to form the basis for abnormal physiologic behavior. Their absence justifies the inquiry as to whether or not one is dealing with purely functional disturbances in explanation of such unusual instances of complete heart-block.

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[3] Répin: Nouvelles recherches sur la radioactivité des sources goitrigènes, Compt. rend. Acad. d. sc., Aug. 17, 1908; Distribution géographique du goitre en Algérie, Bull. Soc. de path. exot., Paris, May 8, 1912; Les eaux goitrigènes, Rev. d'hyg. et de police sanitaire, 1911, xxxiii, Nos. 4-5; Goitre expérimental, Compt. rend. Acad. d. sc., July 29, 1911.

[4] Hesse, E.: Die Beziehungen zwischen Kropfendemie und Radioaktivität, Deutsch. Arch. f. klin. Med., 1913, xc, 338.

[1] Toch, Maximilian: Lead-Poisoning, Jour. Ind. and Eng. Chem., 1913, v, 434.

[1] Cohn, A. E.: Curves from a Case of Transient Complete Heart-Block, Showing Constantly Varying Ventricular Complexes, Proc. Soc. Exper. Biol. and Med., 1911, ix, 24.

[2] Oppenheimer, B. S., and Williams, H. B.: Prolonged Complete Heart-Block, without Lesion of the Bundle of His and with Frequent Changes in the *Atrioventricular* Electrical Complexes, Proc. Soc. Exper. Biol. and Med., 1913, x, 86.

AN INDEX OF GENERAL NERVOUS CONDITIONS

For more than one reason a reliable index to the general nervous condition of an individual is a desideratum. If a dependable method of judging the state of the nervous system could be devised it would doubtless find a profitable application in the study of abnormal individuals and serve to elucidate neurologic and psychopathic conditions in man. Drs. Grabfield and Martin[1] of the Harvard Medical School have succeeded in measuring the irritability of normal individuals in terms of sensory thresholds for faradic stimulation. The scheme consists in determining the strength of the stimuli required to awaken sensation in the fingers of a hand immersed in a liquid electrode. The results obtained with adult males show a diurnal variation such that there is a period of high irritability between 10 and 11 in the morning, a steadily declining irritability to a minimum at about 4:30 in the afternoon, and a subsequent gain in irritability continuing till the end of the tests at 8:30 in the evening. These variations in irritability agree closely with published observations on the working capacity of muscles and in a general way with data on the varying reaction-time of man. The conclusion is drawn that the daily variation is a central rather than a peripheral phenomenon; probably, therefore, estimations of the sensory threshold by Martin's method will presently find an application in the domain of the pathology of the nervous system. Meanwhile the morning and early evening are marked as the periods of highest activity.

NEW YORK'S ACTION ON THE FRIEDMANN INSTITUTE

An occurrence which, rightly considered, serves to add weight to the demand for governmental investigation of tuberculosis treatments, is the action of the New York City Board of Health in prohibiting treatments of the Friedmann class until they have been investigated. It will be recalled that the plan for exploiting the Friedmann treatment, when the U. S. Public Health Service refused to endorse it, contemplated the preparation of the cultures in each state. Thus, since the product was not to become an article of interstate commerce, the United States Public Health Service would not have jurisdiction over its sale. Its exploitation would be a matter exclusively for local control. The Board of Health of New York City has taken action to prevent administration of living bacterial organisms for the prevention of treatment of disease in the city, until full and complete data regarding preparation, dosage and methods of administration have been submitted to the board, and until the state board has granted permission for the use of such preparation. The first thought which comes to one's mind on reading of this action is the hope that other boards of health, city and state, especially the latter, may feel their responsibility as has the New York City Board of Health. The second thought is the reflection that where no power exists, no responsibility can lodge. Few, if any, boards of health in this country have power to deal with the situation so effectively as has the New York board. In one state the control of serums, vaccines, etc., may be the business of the state board of pharmacy; in another, that of the state department of agriculture; in another, that of the laboratory of the state university; while in still others, there is actually no body legally constituted to cope with the situation. The need for adequate legislation on the subject throughout the country is at once apparent, as is also the need for a central body to aid in correlating all the data and to furnish expert advice to the authorities on whom may fall the responsibility for action.

MEDICAL BOOKS FOR FLOOD SUFFERERS

The wide-spread damage caused by the floods this spring has included all ranks of people, and physicians did not escape. We print in the Correspondence Department of this issue an appeal for gifts of books to replace a practical working and reference library at Dayton, Ohio. At the time of the floods and tornado, the self-reliance and manly independence of physicians throughout Indiana and Ohio, not to mention tornado-swept Omaha, who had lost their homes, equipment and other property in the flood, prevented us from calling for financial aid on their behalf. This proposition to allow the medical men throughout the country to assist the Dayton profession to replace its reference library is a most worthy project. It would be best to make offers of books by letter first and to hold the books until the offer is accepted, so as to avoid duplication. If it were possible as the result of this appeal, approximately to replace this lost library, each book perhaps bearing on its fly-leaf an inscription of the giver, it would make a worthy memorial in Dayton—a testimony to the spirit of brotherly love that exists in our profession.

ANOTHER DENOMINATIONAL ORGAN DROPS NOSTRUMS

Another of the old standbys of the nostrum-maker has thrown off the shackles and will attempt to achieve success without the money received from nostrum advertisers. The *Advance* of Chicago, the great Congregational weekly, has been released from its handicap of many years through changes in the control of the paper. It has passed to other hands and a new board of editors has been appointed. One of the first acts of the new administration has been to throw out nearly the whole line of "patent-medicine" advertisements—retaining only a few of what the publishers may perhaps call simple home remedies. For a score of years many physicians and others have refused to subscribe to this paper, even though they were Congregationalists and would have otherwise desired to have it in their homes, but the nostrum advertisements debarred it. To offset the loss in revenue, the paper is making an appeal for an increased subscription list, and it deserves the hearty response which we are informed that it is receiving. The new editors are injecting new life and spirit into the pages so that honesty in advertising is not the only means of attracting new subscribers. We wish the *Advance* success.

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[1] Grabfield, G. P., and Martin, E. G.: Variations in the Sensory Threshold for Faradic Stimulation in Normal Human Subjects, Am. Jour. Physiol., 1913, xxxi, 300.

PRODUCTION OF TUBERCULOUS ANTIBODIES IN CATTLE

Rothe and Bierbaum[1] have published certain results in the immunization of cattle with tubercle bacilli which appear to be of considerable importance to the study of immunity in tuberculosis. They aimed to find a method whereby larger amounts of tuberculous antibodies could be produced. For this purpose they injected cattle intravenously with variously treated tubercle bacilli and products thereof, and it was found that injection of the whole bacilli killed either by prolonged desiccation or by treatment with alcohol gave by far the best results. A single intravenous injection of from 30 to 50 mg. of such bacilli, whether of the human or bovine type, gave a marked and prompt production of antibodies, which usually reached their height on the seventh day to persist into the second month, when a pronounced diminution or even total disappearance would take place. Certain tuberculin preparations had little or no antigenic powers. The antibodies tested were the complement-fixing amboceptor and the precipitin. In their course these two substances appeared to run fairly parallel although not absolutely so. Quite similar results were obtained in the case of horses also. Having established conclusively that antituberculous substances can be produced under these circumstances, the effect of repeated intravenous injections of dead bacilli was tested and the results indicate that a considerable protection against virulent bacilli can be created by this wholly harmless method. Whether or not the serum of animals so treated possesses any real curative powers does not appear to have been determined. Perhaps the most important result of this work so far as immediate availability for practical use is concerned is that by means of this serum, which is rich in tuberculous antisubstances, it may become feasible to test the various tuberculins, of which such a large number are offered for sale, for their actual content in specific derivatives of tubercle bacilli, by means of test-tube methods. For this purpose the specific precipitin test would be especially serviceable. We long have needed some easily applied test of this kind in order to exercise some control of commercial tuberculins, and it now seems that this can be done. The work by Rothe and Bierbaum also has a bearing on the problem of protective inoculation of human beings against tuberculosis in so far as they show that there are methods of killing tubercle bacilli with retention seemingly in large measure of their antigenic power.

A MILLION DOLLARS FOR MEDICAL EDUCATION

Another large gift to medical education comes in the offer of a million dollars from Mr. Andrew Carnegie for the medical department of Vanderbilt University, Nashville, Tenn.[1] A condition of the donation provides that the direction of the educational and scientific work of the department shall be committed by the board of trustees to a small board of seven members, three of whom are to be eminent in medical and scientific work. It is said that the offer has already been accepted by the executive committee of the board of trustees and that this action comes before the whole board for ratification June 16. No medical school in this country is more deserving of good fortune than is the medical department of Vanderbilt University, since the school, in spite of having to contend against obstacles probably greater than those which have confronted any other school, has always been an ardent champion of reasonably high standards of preliminary and medical education. Located as the university is in the state which at present has the weakest legal requirements regulating the practice of medicine, the gift, if accepted will have a beneficial effect on medical education not only in Tennessee but also in the entire South.

Medical News

ALABAMA

New Officers.—Annual meeting of the University of Alabama School of Medicine Alumni Association, held in Mobile, May 21: president, Dr. Angelo Festorazzi, Mobile; secretary-treasurer, Dr. P. J. Howard, Mobile.

Personal.—Dr. P. J. M. Acker, Mobile, has been appointed surgeon of the Mobile Light and Railroad Company, vice Dr. W. G. Ward, deceased.——Drs. J. T. Searcy, Tuscaloosa, and G. T. McWhorter, Riverton, were elected vice-presidents of the American Sociologic Congress at its meeting in Birmingham, April 24.

Building for Professional Men in Birmingham.—Plans have been completed for the proposed Hygeia building, a nine-story structure to be erected on Ninth Avenue, between Twentieth and Twenty-First Streets, Birmingham, for the use of physicians and dentists. The top floor is to be used for an auditorium, the use of which is to be given to the Jefferson County Medical Society free of expense.

ARIZONA

Personal.—Dr. William A. Holt, Globe, who has been in serious condition in Mercy Hospital, Chicago, as the result of septicemia following an operation wound, is reported improving.——Dr. H. E. Crepin has been appointed health officer of Tucson.

New Officers for State Association.—At the annual meeting of the Arizona Medical Association held in Globe, May 19-21, Tucson was selected as the next meeting place and the following officers were elected: president, Dr. Ira E. Huffman, Tucson; vice-presidents, Drs. J. W. Flinn, Prescott, E. B. Ketcherside, Yuma, and R. Ferguson, Bisbee; secretary, Dr. C. E. Yount, Prescott; delegate to the American Medical Association, Dr. J. E. Bacon. Miami. The association voted to continue the publication of the *Arizona Medical Journal*. Drs. Charles T. Sturgeon and R. D. Kennedy, Globe, were indorsed as candidates for the vacancy on the State Board of Medical Examiners caused by the resignation of Dr. William A. Holt, Globe.

ARKANSAS

Women Physicians Organize.—Women physicians of Arkansas met in Little Rock May 20, on the occasion of the State Medical Society meeting, and organized the Woman's Medical

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[1] Rothe and Bierbaum: Ueber die experimentelle Erzeugung von Tuberkulose-Antikörpern beim Rind; zugleich ein Beitrag zur Tuberkulose-Immunisierung, Deutsch. med. Wchnschr., 1913, xxxix, 625.

[1] See Medical News, Tennessee, this issue.

Club of Arkansas, electing Dr. Olive Wilson, Paragould, president; Drs. Elzora Butler Allen, Wye, and Irene Tatman, Eureka Springs, vice-presidents, and Dr. Ida J. Brooks, Little Rock, secretary-treasurer.

State Board Appointments.—The following have been appointed members of the State Medical Board of the Arkansas Medical Society: second district, Dr. T. J. Stout, Brinkley, vice Dr. F. T. Murphy, Brinkley; third district, Dr. E. F. Ellis, Fayetteville, vice Dr. F. B. Young, Springdale, recently elected president of the State Board of Health; sixth district, Dr. W. S. Stewart, Pine Bluff, to succeed himself, and seventh district, Dr. J. C. Wallis, Arkadelphia.

Dr. Murphy Presented with Loving-Cup.—At the recent meeting of the State Medical Board of the Arkansas Medical Society in Little Rock, May 23, Dr. F. T. Murphy, Brinkley, secretary of the board, was presented with a handsome silver loving-cup by his fellow members of the board as a token of regard and esteem. Dr. Murphy retired from the secretaryship under the rules governing the State Medical Society, which provide that no one person can fill an office for more than eight years.

State Society Meeting.—The annual meeting of the Arkansas Medical Society held in Little Rock, May 20-23, is said to have been the most successful in the history of the organization. Six additional counties were reported to have been organized during the year, and an increase of 15 per cent. in membership was announced. It was decided that nongraduates should be denied admission to county and state medical societies. The following officers were elected: president, Dr. F. B. Young, Springdale; vice-presidents, Drs. L. E. Moore, Searcy, S. L. Steer, Hot Springs, and F. G. Richardson, Heber Springs; secretary, Dr. C. P. Meriwether, Little Rock (reelected); treasurer and editor of the State Journal, Dr. W. R. Bathurst, Little Rock (reelected); councilors, Dr. M. C. Hughey, Rector, first district (reelected); Dr. T. B. Bradford, Cotton Plant, third district (reelected); Dr. J. S. Rinehart, Camden, fifth district and secretary; Dr. John F. Rowlan, Hot Springs, eighth district; Dr. W. A. Snodgrass, Little Rock, (holdover) chairman, and Dr. A. M. Hathcock, Harrison, ninth district; delegates to the American Medical Association, Drs. Morgan Smith, Little Rock, and W. V. Laws, Hot Springs; alternates, Drs. Carle E. Bentley, Little Rock, and A. U. Williams, Hot Springs; section officers—practice of medicine, Dr. C. J. March, Fordyce, chairman, Dr. S. J. McGraw, Eldorado, secretary; surgery, Dr. C. S. Holt, Fort Smith, chairman, and Dr. Earle H. Hunt, Clarksville, secretary; obstetrics and gynecology, Dr. R. L. Saxon, Little Rock, chairman, and Dr. O. D. Ward, England, secretary; pathology, Dr. F. B. Kirby, Harrison, chairman, and Dr. L. O. Thompson, Little Rock, secretary; state medicine and public hygiene, Dr. J. L. Greene, Little Rock, chairman, and Dr. C. W. Garrison, Little Rock, secretary; dermatology and syphilology, Dr. J. L. Chesnutt, Hot Springs, chairman, and Dr. J. M. Proctor, Hot Springs, secretary; diseases of children, Dr. N. E. Murphy, Clarendon, chairman, and Dr. A. R. Hederick, Booneville, secretary. It was decided to hold the next annual meeting at Eldorado. The president, in his annual address, referred to the sacred mission of the physician, congratulated the profession on the recently enacted bill providing for a State Board of Health, and bespoke the hearty cooperation of every member of the society in the work of sanitation, prophylaxis and vital statistics that has been inaugurated.

CALIFORNIA

New Officers.—Orange County Medical Association at Orange, May 13: president, Dr. H. A. Johnston, Anaheim; secretary, Dr. Welch, Santa Ana.

Building for Physicians.—A seven-story building is being constructed in San Diego for the especial use of physicians and dentists. The building is to be of reinforced concrete and fire-proof.

Million for Research Bureau.—Mrs. George William Hooper, San Francisco, is said to have transferred to the University of California $1,000,000 for the establishment of an institute of medical research. The foundation is to be controlled by an advisory board of seven members, consisting of the president of the Carnegie Institute, the professor of pathology at Johns Hopkins University, the director of the Rockefeller Institute for Medical Research, the president and dean of the medical school of the University of California, a representative of the donor and a member to be chosen by the western members of the advisory board.

Promotions and Appointments.—The following promotions and new appointments have been made in the Stanford University Medical Department: Dr. Thomas Addis has been promoted to associate professor of medicine, Dr. E. C. Dickson and Dr. W. W. Boardman have been made assistant professors of medicine, Dr. Leo Eloesser and Dr. F. E. Blaisdell have been made assistant professors of surgery. Dr. R. G. Brodrick has been appointed assistant clinical professor of hygiene and public health. Dr. W. F. Schaller has been made assistant clinical professor of medicine, assigned to neurology, and Dr. J. M. Wolfsohn clinical instructor in medicine assigned to neurology. Dr. A. A. O'Neill has been promoted to clinical instructor in medicine and Dr. G. A. Rothganger has been appointed clinical instructor in surgery.

CONNECTICUT

State Society Meeting.—At the annual meeting of the Connecticut State Medical Society held in Hartford, May 21-22, the following officers were elected: president, Dr. D. Chester Brown, Danbury; vice-presidents, Drs. W. S. Hulbert, Winsted, and Kate C. H. Mead, Middletown; secretary, Dr. M. M. Scarbrough, New Haven, and treasurer, Dr. Joseph H. Townsend, New Haven.

Personal.—Dr. and Mrs. Morris Tuch, Hartford, have returned from abroad.——Drs. Robert S. Starr, James F. Rooney, D. J. Molumphy and D. W. Tracy have been reappointed medical inspectors of the health board of Hartford, and Dr. Arthur J. Wolff has been reappointed bacteriologist.——Dr. Edward Carter Perkins, Hartford, sailed for China, recently. He has purchased a site in Gin Giang on which he is to build a men's hospital of which he will be superintendent and which will be operated under the Methodist Episcopal Mission Board.

ILLINOIS

Personal.—Dr. R. S. Gazelle, formerly a practicing physician at Armington, has been appointed first lieutenant in the Medical Corps of the Egyptian Army and is stationed at Port Bruce, Sudan.——Dr. Elizabeth B. Ball, Quincy, secretary of the Adams County Medical Society, sailed for Europe, May 31. Dr. D. G. Stine, Quincy, will act as secretary during her absence.——Dr. E. L. Mitchell has been elected vice-president and Dr. Ralph Graham, secretary, of the Monmouth Hospital Association.——Dr. Samuel M. Green, Dixon, charged with being responsible for the death of [illegible] has been acquitted.——Dr. B. H. King, [illegible] of Granite City, has resigned.——Dr. and Mrs. E. K. Lockwood, Virden, have returned from Europe.——The office and residence of Dr. John W. Botkin, Virden, was burned to the ground, May 12.——Dr. G. W. Fockler, Delavan, entertained a number of his brother practitioners at a dinner, May 11, in honor of his fiftieth birthday anniversary.

Chicago

Personal.—Drs. Isaac A. Abt, Ernest Lackner and Julius H. Hess have been appointed attending medical staff of the Sarah Morris Hospital for Children, and Drs. Mark Jampolis, Albert H. Beifeld and Jesse R. Gerstley, associate medical staff.——Dr. John D. McGregor, city physician, was the guest of honor at a banquet March 22.

KENTUCKY

Hospital Sold.—Drs. J. N. McCormack and Lillian H. South, Bowling Green, have sold St. Joseph's Hospital to Dr. T. O. Helm, Bowling Green.

Tuberculosis Ward in State Reformatory.—The Prison Commission has instructed the warden of the State Reformatory to have plans drawn for a tuberculosis ward to be erected in the prison yard.

County Sanatorium.—The Lexington Board of Health has indicated its willingness to cooperate with the Fayette County Medical Society and the Fayette Tuberculosis Association in the movement for the establishment of a tuberculosis sanatorium for Lexington and Fayette County.

State Board and Tuberculosis.—At a joint meeting of the State Board of Health and State Tuberculosis Commission held in Frankfort, May 7, a committee was appointed to outline and plan for a cooperative campaign against tuberculosis. The committee consists of Dr. J. N. McCormack, secretary of the State Board of Health, Dr. C. A. Fish, Frankfort, and Dr. C. Z. Aud, Cecilian, for the State Board, and Drs. U. V. Williams and H. S. Keller, Frankfort, Dr. R. T. Yoe, Louisville, and Dr. E. Morris, Sulphur, for the commission, which will meet in Louisville at the call of Dr. McCormack.

MINNESOTA

Resolutions Regarding Dr. Bjelland.—At the last regular meeting of the Blue Earth County Medical Society, memorial resolutions regarding the late Dr. Adolph Odin Bjelland, Mankato. were read by Dr. Helen Hughes Hielscher and adopted by the society.

Personal.—Dr. Willard P. Greene, physician in charge of the White Earth Agency, has been appointed epidemiologist of the State Board of Health.——Dr. I. J. Murphy has been reappointed assistant health commissioner and epidemiologist of the Department of Health of Duluth.

Sanatorium Notes.—There are now about one hundred patients at the State Sanatorium for Tuberculosis, Walker, and improvements are in progress which will cost about $200.000 and which will increase the capacity of the institution to 180.——The new tuberculosis sanatorium for St. Paul and Ramsey County will be constructed according to the original plans on the grounds of the City and County Hospital at a cost of $100.000, of which the state and county each pays one-half.

NEW JERSEY

Camden's Hospital Fund.—Within two days of the close of the campaign to raise $100,000 for the West Jersey Homeopathic Hospital, $46.000 had been secured.

Small-Pox in Stockton.—The State Board of Health began, May 26, an investigation of an outbreak of small-pox in the borough of Stockton. Hunterdon County.

Ice Cream Sellers Warned.—May 26. Dr. B. H. Warren, chief food inspector of Atlantic City. filed notice with nine of the seventeen ice cream manufacturers giving them twenty-four hours to place their factories in sanitary condition. Licenses for the ensuing year were issued May 27.

Hospital News.—Bergen County is to have a tuberculosis hospital to cost about $175.000.——The Weeks Memorial Hospital at the New Jersey State Village for Epileptics, Skillman, was dedicated recently. The hospital is named in honor of the late Henry M. Weeks, Trenton, first superintendent of the village.——The city of Camden has been authorized to issue bonds amounting to $25,000 to raise funds for the furnishing of the new Camden Municipal Hospital.——In the campaign held in Orange, recently, to raise $150,000 or more for the Orange Memorial and New Jersey Orthopedic hospitals, the pledges during the twelve days of the campaign exceeded by $15.000 the amount it was desired to raise.——A tract of land 100 by 150 feet on Rutherford Avenue, Trenton, has been given to Mercer Hospital by W. S. Hancock, president of the board.

NEW YORK

Medical Club Organized.—Physicians of Albany have organized the Harvey Medical Club and elected Dr. J. B. Congdon, president. and Dr. William F. Conway, secretary-treasurer.

Personal.—Dr. L. L. Wiles, Amsterdam, who has been ill with septicemia due to an operation wound, has recovered. ——Dr. John Gerrin, physician at the Auburn State Prison, has resigned.

Research Laboratory at Otisville Sanatorium.—At a meeting of the Board of Health held Jan. 31, 1913, a resolution was adopted requesting the consent of the Board of Estimate and Apportionment to the expenditure of a sum not exceeding $16.000 from funds at the disposal of the Board of Health from the sale of vaccine virus and surplus bacteriologic products, to enable the department to establish a branch of its present Research Laboratory on the grounds of the Municipal Sanatorium for Tuberculosis at Otisville, Orange County. The objects sought by such a laboratory are the routine examinations incident to caring for the 600 patients in the institution at Otisville; the pursuit of special research work, the pathologic and bacteriologic work in connection with the production of vaccine and antitoxin serums; the study of the diseases of animals in connection with and affecting these products, and investigations having in view the more economical production of the various bacteriologic products and their wider and more practical ultilization in the prevention and treatment of contagious diseases. At a meeting of the Board of Estimate and Apportionment on April 24, the Board of Health was empowered to expend $12.757 during the nine months beginning April 1.

New York City

Must Take Typhoid Vaccine.—All nurses, members of the house staff, orderlies, laundresses and attendants in Mount Sinai Hospital will be immunized against typhoid by vaccine. For some time past immunization has been voluntary and few availed themselves of it.

New Flower Hospital.—The cornerstone of the new building for Flower Hospital was laid at the corner of Eastern Boulevard and Sixty-Sixth Street on May 28. On this occasion lantern slides of the new building as it will appear when completed were shown. It is announced that the hospital will continue its ambulance service, which is the largest of any private hospital in the city.

Personal.—Dr. and Mrs. L. E. La Fetra have sailed for Europe.——Dr. Ludwig Weiss has been appointed consulting dermatologist to St. Mark's Hospital.——Dr. Mary V. Glenton, formerly of New York City, a medical missionary in charge of the Elizabeth Bunn Memorial Hospital, Wu Chang, China, reached New York, May 19.——Dr. Oscar M. Schloss has succeeded Dr. Ira S. Wile as conference physician at the Riverside Kitchen of the New York Diet Kitchen Association.

OHIO

Personal.—Dr. C. H. Humphreys, Dayton, was operated on in Leeds, England, recently for the removal of an infected gall-bladder.

Cincinnati

Personal.—Dr. A. C. Bachmeyer, assistant superintendent of the Cincinnati Hospital, has resigned.

Dr. Woolley Resigns.—Dr. Paul G. Woolley, dean of the Medical Department of the University of Cincinnati, has resigned, but retains his professorship.

PENNSYLVANIA

Anti-Vaccination Bill Defeated.—On May 28, the bill to amend the vaccination law so that vaccination should be required only in time of outbreaks of small-pox was defeated in the house.

Small-Pox.—Six cases of small-pox have been reported to the State Department of Health from Salisbury township, adjacent to Bethlehem, and two cases from Fountain Hill Borough, adjoining South Bethlehem. These communities are the homes of many of the employees of the Bethlehem Steel Works. All employees will be vaccinated. The county medical inspectors and the local health authorities in Bethlehem, South Bethlehem, Allentown and Fountain Hill are urging all persons not vaccinated within five years to be vaccinated.——A case of small-pox was discovered on the United States Battleship *Wisconsin*, at the Philadelphia Navy Yard, May 29. The vessel was placed under quarantine until the officers and members of the crew, 300 persons, were vaccinated.——Owing to the discovery of five small-pox cases in two houses on Darien Street near Columbia Avenue, Philadelphia, May 31, a wholesale quarantine of the district was established.

Philadelphia

Charter Granted Clinical Society.—The Clinical Society of Philadelphia, which has been planning to establish a scientifically constructed and arranged building where lectures and demonstrations may be held, has been granted a charter. One was also issued to the American Society for Physicians' Study Travels.

Mortality Records Low.—Mortality records for the week ending May 31 show that Philadelphia is steadily maintaining the high standard attained last year of being one of the healthiest of the larger cities. The deaths for the week were 436, or a mortality rate of 13.89 per thousand of population as compared with 15.22 for the entire twelve months of 1912.

SOUTH DAKOTA

New State Society Officers.—At the annual meeting of the South Dakota State Medical Association, held in Vermillion, May 27-29, the following officers were elected: president, Dr. Fred A. Spafford, Flandreau; vice-presidents, Drs. Fred Treon, Chamberlain, and J. B. Vaughn, Castlewood; secretary-treasurer, Dr. R. D. Alway, Aberdeen (reelected); councilors, Drs. H. T. Kenney, Pierre, and T. J. Billion, Sioux Falls.

TENNESSEE

Sanatorium Ready.—The new Chattanooga Tuberculosis Sanatorium is practically ready for occupancy. It is located in Hill City and has been erected at a cost of about $75,000. It consists of a main administration building, two stories in height, and four cottages. The sanatorium will be under the direct charge of the Chattanooga Tuberculosis Society.——A new ward has been opened at the Nashville City Hospital especially fitted up for infants and children, with accommodation for eighteen patients.

A Million for Vanderbilt.—It has just been announced that Mr. Andrew Carnegie has offered to donate to Vanderbilt University one million dollars for the development of its medical department. Of this sum $200,000 is intended to be given at once for the erection and equipment of laboratories, while the remaining $800,000 will be given as an endowment, the income from which will be paid annually for the support of the medical department. This is the largest single gift ever given to the university.

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WEST VIRGINIA

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Good Health Work.—Dr. Harriet B. Jones, Wheeling, has taken up active work with the tuberculosis exhibit of the state. A car has been presented by the Baltimore and Ohio Railroad and free transportation has been given over all railroads in the state. It is the intention of Dr. Jones to pass through every county in the state and several places in the county, giving lectures on tuberculosis. The legislature has appropriated $9,900 for the expenses. Dr. Thurmon Gillespy will accompany the tuberculosis car and deliver lectures, en route.

GENERAL

Medico-Psychologists to Meet.—The sixty-ninth annual meeting of the American Medico-Psychological Association will be held at the Clifton Hotel, Niagara Falls, June 10-13, under the presidency of Dr. James T. Searcy, Tuscaloosa, Ala.

Albany Alumni at Minneapolis.—Among the alumni gatherings at the Minneapolis session of the American Medical Association Tuesday, June 17, will be a meeting of the graduates of Albany Medical College at the Hotel Radisson, at 5 p. m.

Frisco Surgeons Meet.—The Frisco System Medical Association held its twelfth annual meeting in Oklahoma City, Okla., May 26-27 and elected the following officers: Dr. J. R. Dawson, Birmingham, Ala., president; Drs. C. M. Lutterloh, Jonesboro, Ark., and J. D. Osborn, Frederick, Okla., vice-presidents; F. E. Chalmont, St. Louis, secretary (reelected), and Dr. W. A. Camp, Springfield, Mo., treasurer (reelected). Birmingham was selected as the next place of meeting.

Prize for Means to Cure Typhoid Carriers.—The medical press of the world is asked to spread the news that a prize of $2,500 will be awarded in Germany to the person of any nationality who can devise a means by which typhoid carriers can be freed from the bacilli and the stools and urine remain free from them for at least half a year after treatment. The jury to award the prize consists of Ehrlich, Gaffky, Uhlenhuth, Kraus and Hoffmann besides the surgeon-general of the army. The description of the method offered in competition must be in German and be in the hands of the jury before October, 1914.

Government Loses Steamship Suit.—In the case of the Holland-America Steamship line which sued the United States for $2,167.80, paid for medical treatment of aliens brought to this country and held at Ellis Island on account of some temporary contagious disease, the Federal District Court held that there was nothing in the law to compel the treatment of aliens aboard a ship when the government had proper facilities, such as Ellis Island, for their treatment. Steamship companies, it was decided, are liable for the care and maintenance of sick aliens only when they are brought to this country through negligence, the company knowing that they are suffering from contagious diseases. The government's attorneys argued that the government had the right to compel the steamship company to keep sick passengers aboard ship and that their removal was assented to only after the steamship company had practically consented to pay their expense. Judge Mayer considered that this might mean injustice to the other passengers and shippers if contagious sickness appeared, and ruled against the government.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 24, 1913.

International Medical Congress

As stated before, the membership subscription to the International Medical Congress is sufficient only to cover the expense of publishing the transactions. A subscription list for private donations has therefore been opened to meet the expenses of the congress, which it is expected will be attended by 7,000 persons. A large sum has already been subscribed by about 600 leading physicians; the individual subscriptions vary from $5 up to $1,000; but a further sum of $12,500 is required to meet the necessary expenditure. Elaborate preparations are being made for the entertainment of the members, and private hospitality will be extended to them by the king and many prominent men, the medical corporation and some of the city livery companies.

Particulars have already been given with regard to the sections of medicine and surgery, and some may now be added with regard to the section of physiology. The president is E. A. Schäfer. There are three set discussions. The one which appears to be exciting most interest is on the internal secretions, which will be held jointly with the section of medicine. The reporters in this discussion are Gley of Paris and Biedl of Strasburg. To introduce this subject a discussion on endogenous protein metabolism, to be held in conjunction with the subsection of chemical pathology, will be introduced by Abderhalden, H. D. Dakin and G. Embden.

The third discussion will be confined to the section of physiology and will deal with the question of reciprocal innervation; it will be introduced by Sherrington and Max Vernon. Perhaps the most interesting meetings of this section will be three laboratory meetings, at which demonstrations will be given. These will be held in the physiologic laboratories of the University of London, University College, London, and King's College, London, respectively.

ARRANGEMENTS FOR SOCIAL FUNCTIONS

In spite of the large number expected to attend the International Medical Congress, so much hospitality has been proffered that it has been necessary to refuse many invitations. With comparatively few exceptions arrangements have been made for the entertainments to be conducted on a private basis. After the formal opening of the congress by Prince Arthur of Connaught at 11 a. m. Wednesday, August 6, arrangements have been made for a government dinner, at which 500 guests of the congress will be entertained. The king, acting as patron, has invited 2,000 members to attend a garden party at Windsor, Saturday, August 9. During the week, probably on Friday, a congress soirée will take place at the Natural History Museum. For the most part the dinners which have been arranged are sectional, but the president is to entertain 100 of the leading members of the congress at a dinner, August 11. Lord Strathcona has also promised hospitality on an extensive scale. Among the luncheons is to be one at the Royal Free Hospital and another at St. Bartholomew's Hospital. Garden parties are to be given by the Bethlem Royal Hospital, by the dean of faculty of medicine of the University of London, by St. Bartholomew's Hospital and by Mr. Waldorf Astor. There is to be a Masonic meeting on the afternoon of Monday, August 11, and excursions have been arranged to Brighton, Harrogate, Stratford-on-Avon, Oxford, Cambridge and Bath. Tuesday, August 12, a dinner will be given by the Apothecaries' Society, and on the same evening receptions have been arranged at the Royal College of Surgeons, at the Royal Society of Medicine, at the Royal Army Medical College, at University College, Hospital Medical School and at the Grocers' Company. Sir William Lever is also to give an entertainment.

To relieve the difficulties of organization, much of the work of entertainment is being distributed among the sections. The various London committees include most of the leading medical men in London, and arrangements have been made to insure that all those who attend the congress shall be entertained privately. The business of the various sections will be conducted both in the morning and in the afternoon, but as it is the common experience of congresses that members attend only a part of the sessions, excursions are being arranged day by day to various places of interest in London. Many of the sections have already arranged to hold sectional dinners and to attend special soirées. Among the morning and afternoon engagements the surgical section is to visit the Barbers' Hall (it may be remembered that in the middle ages the functions of barber and surgeon were combined in the "barber surgeons") and to attend garden parties at Cambridge and Henley. The section of children's diseases will visit the Cripples' Home at Alton, and the section of psychiatry is to inspect Claybury Asylum, and on Wednesday, August 13, will pay a visit to Cardiff. The president of the section of stomatology is to give a garden party, and the section of laryngology and otology has been invited to Oxford.

National Association for Prevention of Infant Mortality

This association has made arrangements to hold an English-speaking conference on infant mortality at Caxton Hall, Westminster, London, August 4 and 5, the two days preceding the opening of the International Medical Congress. It is under the immediate patronage of the king and queen and will be presided over by Mr. John Burns. Lady Aberdeen, Mr. Pease, Sir George Newman and Dr. Arthur Newsholme are among the chairmen of the various sessions into which the two sections — administrative and medical — are divided. Papers will be read by experts from the United Kingdom, the United States and the colonies on many aspects of the following questions: The responsibility of central and local authorities in the matter of infant and child hygiene; the necessity for special education in infant hygiene; medical milk problems; the administrative control of the milk-supply, and antenatal hygiene. The United States and a large number of colonial governments will be officially represented and the attendance generally promises to be large. The British railways and steamship companies with services to the colonies and to the United States have all granted special traveling facilities, particulars of which are set forth in the detailed program, which may now be obtained from the secretary of the National Association for the Prevention of Infant Mortality, at 4 Tavistock Square, London, W. C. The subscription for membership is $5. The corporations of Liverpool and Glasgow have each given a donation of $250 toward the expenses of the conference, that of London has given $125, and many other towns are sending smaller sums in proportion to their population.

Annual Meeting of the British Medical Association

The eighty-first annual meeting of the British Medical Association will be held at Brighton, July 22-25. Sixteen sections have been arranged. Some of the more important papers may be mentioned. In the section of bacteriology and pathology the papers will include one by Dr. Miller Galt on "The Value of the Blood-Count in Obscure Bacterial Infections," and an account by the staff of the John Howard McFadden Research Fund on "Some Researches on the Jelly Method of Staining Cells Alive." A joint discussion has been arranged with the section on pharmacology on "Anaphylaxis," the papers promised including a consideration of "The Action of Asbestos and other Finely-Divided Substances on Various Physiologic Substances." In the section of climatology and balneology there will be discussions on "Sea Bathing," to be opened by Dr. W. J. Tyson, and on "The International Aspects of British Health Resorts," to be opened by Dr. Neville Wood. In the section of diseases of children, Dr. E. J. Poynton and Dr. Carey Coombs will initiate a debate on the "Affections of the Heart in Childhood." In the section of electrotherapeutics papers and discussions have been arranged on "Roentgen Diagnosis," on "Electrodiagnosis and Electrotherapeutics" and on "Roentgen Therapy and Radium." The subjects chosen for discussion in the section of medical sociology are "Crime and Punishment" on which Dr. Charles Mercier, Sir Bryan Donkin and Dr. James Scott will read papers, and on "Hospitals in Relation to the Stage, the Public and the Medical Profession," in which Sir Henry Burdett and Dr. I. G. Gibbons will read papers. The discussion will, it is hoped, prove valuable in helping to elucidate the problems involved in providing hospital accommodation for insured persons under the national insurance act. A discussion on "Eugenics" will be introduced by Professor Bateson, to be followed by Dr. Stewart Mackintosh, and Mr. Benedict Davenport of New York. The arrangements for the navy, army and ambulance sections include a paper by Major Birrell on "Notes on the Work of a British Red Cross Unit with the Bulgarians."

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 16, 1913.

Personal

During the session of May 13, the Académie de médecine elected a member of the section of operative medicine to replace Professor Segond, who died last October. Dr. Bazy, surgeon of the hospitals of Paris, who is especially well known through his works on diseases of the urinary passages, was elected.

Dr. Théophile Anger, formerly surgeon of the hospitals of Paris, has died, aged 77. He was on the staff of Napoleon III during the war of 1870, in which he took an active part. He has left few written works, but he formerly was a very active surgeon. He brought into notice an autoplastic procedure for the cure of hypospadias and epispadias. He was also much interested in advanced cystotomy procedures and he was the first to call attention to hypogastric cystotomy. He applied to the reduction of luxations the method of elastic traction by large rubber tubing, and devised a number of ingenious apparatus for club-foot and for coxalgic deformities.

Tuberculosis and the Brushing of Clothes

Professor Letulle read before the Académie de médecine, May 13, a report by Dr. Chaussé, who showed experimentally that brushing clothes soiled with dried tuberculous sputum set in motion respirable, virulent particles. Chaussé exposed guinea-pigs to powder caused by the brushing of such clothes. He states that he used clothes the sputum on which was of different ages; all the guinea-pigs were infected by that dating from the second and fourth days; but the number of infections diminished in proportion as the sputum became more and more dry. The danger, however, was not completely over at the end of fifteen days, a fact which was shown by an infection from sputum sixteen days old.

A Million for Vanderbilt.—It has just been announced that Mr. Andrew Carnegie has offered to donate to Vanderbilt University one million dollars for the development of its medical department. Of this sum $200,000 is intended to be given at once for the erection and equipment of laboratories, while the remaining $800,000 will be given as an endowment, the income from which will be paid annually for the support of the medical department. This is the largest single gift ever given to the university.

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Medico-Psychologists to Meet.—The sixty-ninth annual meeting of the American Medico-Psychological Association will be held at the Clifton Hotel, Niagara Falls, June 10-13, under the presidency of Dr. James T. Searcy, Tuscaloosa, Ala.

Albany Alumni at Minneapolis.—Among the alumni gatherings at the Minneapolis session of the American Medical Association Tuesday, June 17, will be a meeting of the graduates of Albany Medical College at the Hotel Radisson, at 5 p. m.

Frisco Surgeons Meet.—The Frisco System Medical Association held its twelfth annual meeting in Oklahoma City, Okla., May 26-27 and elected the following officers: Dr. J. R. Dawson, Birmingham, Ala., president; Drs. C. M. Lutterloh, Jonesboro, Ark., and J. D. Osborn, Frederick, Okla., vice-presidents; F. E. Chalmont, St. Louis, secretary (reelected), and Dr. W. A. Camp, Springfield, Mo., treasurer (reelected). Birmingham was selected as the next place of meeting.

Prize for Means to Cure Typhoid Carriers.—The medical press of the world is asked to spread the news that a prize of $2,500 will be awarded in Germany to the person of any nationality who can devise a means by which typhoid carriers can be freed from the bacilli and the stools and urine remain free from them for at least half a year after treatment. The jury to award the prize consists of Ehrlich, Gaffky, Uhlenhuth, Kraus and Hoffmann besides the surgeon-general of the army. The description of the method offered in competition must be in German and be in the hands of the jury before October, 1914.

Government Loses Steamship Suit.—In the case of the Holland-America Steamship line which sued the United States for $2,167.80, paid for medical treatment of aliens brought to this country and held at Ellis Island on account of some temporary contagious disease, the Federal District Court held that there was nothing in the law to compel the treatment of aliens aboard a ship when the government had proper facilities, such as Ellis Island, for their treatment. Steamship companies, it was decided, are liable for the care and maintenance of sick aliens only when they are brought to this country through negligence, the company knowing that they are suffering from contagious diseases. The government's attorneys argued that the government had the right to compel the steamship company to keep sick passengers aboard ship and that their removal was assented to only after the steamship company had practically consented to pay their expense. Judge Mayer considered that this might mean injustice to the other passengers and shippers if contagious sickness appeared, and ruled against the government.

LONDON LETTER

(From Our Regular Correspondent)

London, May 24, 1913.

International Medical Congress

As stated before, the membership subscription to the International Medical Congress is sufficient only to cover the expense of publishing the transactions. A subscription list for private donations has therefore been opened to meet the expenses of the congress, which it is expected will be attended by 7,000 persons. A large sum has already been subscribed by about 600 leading physicians; the individual subscriptions vary from $5 up to $1,000; but a further sum of $12,500 is required to meet the necessary expenditure. Elaborate preparations are being made for the entertainment of the members, and private hospitality will be extended to them by the king and many prominent men, the medical corporation and some of the city livery companies.

Particulars have already been given with regard to the sections of medicine and surgery, and some may now be added with regard to the section of physiology. The president is E. A. Schäfer. There are three set discussions. The one which appears to be exciting most interest is on the internal secretions, which will be held jointly with the section of medicine. The reporters in this discussion are Gley of Paris and Biedl of Strasburg. To introduce this subject a discussion on endogenous protein metabolism, to be held in conjunction with the subsection of chemical pathology, will be introduced by Abderhalden, H. D. Dakin and G. Embden.

be demonstrated; on the other hand, minute solid granule-like substances enter more frequently the left artery than the right, which is referable to the asymmetrical branching of the aorta.

Strubell of Dresden reported on the influence of physical exercise on the function of the heart. He has examined swimmers, skaters, pugilists and other athletes and found that the influence of rational physical exercise on the function of the heart is favorable. On the other hand, all excesses which tend to increase the arterial pressure and tax the heart unusually were found to be decidedly injurious. Thus boxing, at least as carried on by professional boxers, must be regarded as unfavorable for the heart, in spite of the marked strengthening of the musculature. These pugilists die young, generally before the fortieth year.

Friedmann's Treatment for Tuberculosis

German physicians seem not at all concerned with the investigation of the Friedmann tuberculosis remedy. At any rate, nothing further has been published in regard to it, and I do not expect that anything more will appear. The distrust of Friedmann's statements and of his personal character, which was shown by most conservative observers soon after his first appearance, was naturally much strengthened by his trip to America. On hearing of his removal to America I remarked that although he would not secure the million dollars offered for the cure of Mr. Finlay's son-in-law, he would find a way in America to make two millions in another way. The course of his performances in America appears to show that my surmise was correct. The reports which come to us from the German newspapers and the information contained in The Journal are received here with a significant shrug of the shoulders, as if to say: "Just what we expected." Friedmann knew well that his task would not have been so easy in dealing with German physicians and with the German public as in America, where the daily press is even more accessible to sensational reports and advertisement than in Germany, and where the public believes in all things "made in Germany," even against serious objections. Friedmann's calculations will be realized. In spite of the warning of your state boards of health, enough credulous people will be found who will pay sufficiently for his work, and Friedmann, having "made his pile," will spend it either in America or in Germany as a completely independent adventurer who cares nothing for his scientific reputation, for the respect of his colleagues, or even for the opinion of so-called good society. With this happy prognosis I will close for the present the chapter concerning Friedmann.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, May 17, 1913.

A Single Session Each Day in the Schools

Owing to the climate in this country, the schools have hitherto required the pupils to come twice daily to school, (8 to 10 or 11, and 2 to 4 or 5). This gave little time for outdoor exercise, as the children were also bound to do a fair amount of writing at home. For this summer a change has been planned, so that only the morning will be used for teaching purposes, the school hours lasting from 8 to 12. In the afternoons, each class will have to devote at least four hours a week to athletics or outdoor sports, and no indoor teaching will take place after 12 o'clock between May 15 and July 15. The formation of excursion-classes, of plays in the open air, and of swimming and mountain climbing will be favored in every way by the school boards. The hygienic effect of this measure will be no small one, as our children, especially those of the poorer classes, are none too well used to this kind of sports. The health conditions in the poorer schools of the towns and cities are sometimes rather lacking from the point of view of the eugenist, and public feeling is not yet wide awake to the necessities of open air for the development of the young.

Compulsory Admission of Inpatients into Hospitals

The deaths of two persons who sought in vain to be received as inpatients in hospitals in Vienna, and dropped dead in the streets, have evoked a storm of indignation and had the most unexpected effect of inducing bureaucratism to think of its duty. As a result a circular has been sent to all medical men and all medical and charitable institutions to the effect that in future any person applying to a hospital with a certificate from a doctor stating that the bearer is suffering from this or that disease and is urgently needing hospital care for danger of life, must be received without hesitation. This person must be accommodated. The circular does not state how it should be done, if the hospital is completely filled, but it simply says "must be received." Naturally such an order will be a boon to the poor sufferers, but nevertheless the scarcity of beds will continue for some time, and will make it the more imperative to erect new hospitals and charitable institutions. The chief drawback of our hospital system is the fact that we have far too little hospital accommodation for tuberculous patients. They are mostly those who are sent away from one hospital after the other without getting the benefit of a bed; and yet numerous efforts by philanthropists to erect people's tuberculosis sanatoriums in healthy, if fashionable districts, are violently attacked and frustrated by cold-hearted proprietors of hotels and health resorts. More energetic action by the government is expected, which will permit the placing of at least 1,000 beds at the disposal of poor tuberculous patients.

Marriages

Robert Alexander Glenn, M.D., Oakdale, Cal., to Miss Myrtle Weaver of Lancaster, Pa., in Philadelphia, May 20.

Nathan Morris Benyas, M.D., Portland, Ore., to Miss Dorothy Reeder of Scranton, Pa., in Philadelphia, May 20.

Herman Canfield Pitts, M.D., Providence, R. I., to Miss Lucy Esther Macdonald of Princeton, N. J., June 3.

David Howard McKinley, M.D., Winchester, Ky., to Miss Helen Himes of Oxford, Pa., at Louisville, May 21.

John Edwin Froom, M.D., Eagle, Idaho, to Miss Cass Cassmeyer of Newport, Ky., at Boise, Idaho, May 16.

Edward Bartholomew Manion, M.D., Ilion, N. Y., to Miss Margaret Connors of Newport, N. Y., May 14.

Olive Winona Brown, M.D., Salem, Mass., and Mr. Nathan Israel Hale of South Royalton, Vt., June 1.

Harry Boyden Rowe, M.D., Miami, Fla., to Miss Audrey Belle Quinton of Trenton, N. J., May 13.

Robert J. Baskerville, M.D., Detroit, to Miss Georgia Richardson, at Wayne, Mich., April 21.

Gerrit Edward Vermeer, M.D., Rock Valley, Iowa, to Miss Vashti Cram of Sibley, Iowa, May 20.

William Warren Hildreth, M.D., to Miss Kathleen Whitaker, both of New York City, May 21.

John S. Kilbride, M.D., Watertown, N. Dak., to Miss Mary Birchen of St. Paul, Minn., May 12.

Walter Dean Levi, M.D., Louisville, Ky., to Miss Greta Wynant of Anderson, Ind., May 15.

Nelson Horatio Lowry, Jr., M.D., to Miss Amalie C. Pippereit, both of Chicago, May 17.

Charles Allen Stone, M.D., St. Louis, to Miss Smith of Shipman, Ill., May 17.

Deaths

Frederick Forchheimer, M.D. a leader in the profession of Cincinnati, a splendid citizen, eminent teacher and scholarly writer; died in the Jewish Hospital, Cincinnati, June 1, sixteen days after an operation for the relief of acute disease of the prostate gland, aged 59. He was graduated from the College of Physicians and Surgeons, New York City, in 1873 and, after two years of study abroad, located in his native town, Cincinnati. He taught the first course in histology ever presented in the Medical College of Ohio and later filled the chairs of chemistry, physiology, and theory and practice of medicine. In 1889 the college instituted a department of pediatrics with Dr. Forchheimer at its head. He was also dean of the college for four years. He was actively engaged in hospital staff work for more than thirty years, serving as physician to the Good Samaritan and Cincinnati City hospitals and as consulting physician to the Jewish Hospital. He was the author of standard works on "The Prophylaxis and Treatment of Internal Diseases," which appeared in 1907, and of "Therapeusis of Internal Diseases," which was published this year. Dr. Forchheimer was a member of the American Medical Association, president of the Association of American Physicians in 1910 and a member of the American Pediatric Society and Cincinnati Academy of Medicine. The latter body, at a special meeting, adopted resolutions setting forth the irreparable loss suffered by its members in the death of Dr. Forchheimer, and expressing to his family and friends deep sympathy in their great bereavement.

Harry M. Hallock, M.D. College of Physicians and Surgeons, New York City, 1889; Major Medical Corps, U. S. Army, retired in 1908 on account of disability received in line of duty; formerly medical director of the Government Reservation, Hot Springs, Ark.; a member of the American Medical Association; who had suffered for a long while from melancholia; was found dead in the woods near Hot Springs, May 19, from the effects of a self-inflicted gunshot wound of the head, aged 45.

Angus John Murray, M.D. College of Physicians and Surgeons, Chicago, 1885; president of the New Brunswick Medical Society in 1909; a member of the Provincial Board of Health and of the Municipal Council of Fredericton Junction, and for two years warden of Sunbury and Queens County; died at his home in Fredericton Junction, April 3, from pulmonary tuberculosis, aged 57.

Charles P. Bunsen, M.D. University of Heidelberg, Germany, 1855; afterward assistant in the St. Lazare Hospital, Paris, and later a physician to the Russian court in St. Petersburg with service in the Medical Corps of the Russian Army; a citizen of the United States for nearly fifty years; died at his home in Winona, Minn., May 16, from senile debility, aged 82.

Ole T. Hougen, M.D. Northwestern University Medical School, 1888; a member of the American Medical Association and a resident of Grand Rapids, Wis., for nearly twenty-five years; died in Wesley Hospital, Chicago, May 12, after an operation for the relief of obstruction of the stomach and intestines, which was found to be due to malignant disease, aged 50.

Joseph Tomlinson, M.D. College of Physicians and Surgeons, New York City, 1878; a member of the American Medical Association, American Academy of Medicine and Board of Education of Bridgeton, N. J.; chief of the surgical staff of the Bridgeton Hospital; died in the Jefferson Hospital, Philadelphia, May 18, after a surgical operation, aged 58.

Frank Charles, M.D. New York Homeopathic Medical College, New York City, 1895; a Hungarian practitioner known to the poor of the lower East Side of New York as the "angel doctor;" died in his apartment in New York City, May 21, from nephritis, aged about 60.

Ezra H. Cary, M.D. Eclectic Medical Institute, Cincinnati, 1859; Jefferson Medical College, Philadelphia, 1864; surgeon of the Sixteenth Pennsylvania Volunteer Cavalry during the Civil War; died at his home in Prosperity, Pa., March 9, from influenza, aged 82.

Hiram Hunter Ruble, M.D. University of Tennessee, Nashville, 1889; a member of the Tennessee State Medical Association; for twenty-five years a practitioner of Greene County, died at his home near Greeneville, April 21, from valvular heart disease, aged 61.

Franklin P. Miles, M.D. State University of Iowa, College of Homeopathic Medicine, Iowa City, 1893; died at his home in Las Animas, Colo., from the effects of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent, May 15, aged 46.

Charles Alonzo Wilson, M.D. Harvard Medical School, 1869; a member of the American Medical Association; formerly surgeon in the United States Navy and a veteran of the Civil War; died at his home in St. Louis, about May 19, aged 70.

Rankine Dawson, M.D. McGill University, Montreal, 1882; L.R.C.P. Lond., 1881; M.R.C.S, Eng., 1886; for many years surgeon on the steamers of the Peninsular and Oriental Line to the Orient and South America; died in London, April 1, aged 54.

Phineas Sewall Stearns, M.D. College of Physicians and Surgeons, Boston, 1882; for many years a practitioner of Owego and Buffalo, N. Y.; died at the home of his niece in Stony Creek, N. Y., May 5, from senile debility, aged 83.

Robert Parks White, M.D. University of Pennsylvania, Philadelphia, 1886; a member of the American Medical Association and a prominent practitioner of Fort Wayne, Ind.; died at his home in that city, May 19, aged 53.

John Augustus Magee, M.D. University of Vermont, Burlington, 1872; a member of the Massachusetts Medical Society; city physician of Lawrence from 1883 to 1885; died at his home, May 23, from heart disease, aged 65.

Benjamin H. Anderson, M.D. Memphis Hospital Medical College, 1904; of Brownwood; a member of the State Medical Association of Texas; died in Chicago, about May 14, while on his way home from Europe, aged 33.

John M. Kane, M.D. Indiana Medical College, Indianapolis, 1875; for half a century a practitioner of Hamilton County; a veteran of the Civil War; died at his home in Westfield, May 17, from senile debility, aged 82.

Henry McEwen Pettit, M.D. Jefferson Medical College; a surgeon in the Confederate Service during the Civil War and later a resident of Carrollton, Mo.; died in Frederick, Md., April 11, from diabetes, aged 77.

Roch Samuel Moise Mignault, M.D. Ecole de Médecine et de Chirurgie, Montreal, 1859; liberal member of Parliament from Yamaska, Que., for several years; died at his home in Yamaska, March 30, aged 76.

John Henry Allen, M.D. Bellevue Hospital Medical College, 1876; a member of the Medical Society of the State of New York; died at his home in Churchtown, N. Y., February 23, from typhoid fever, aged 72.

John E. Dillon, M.D. Miami Medical College, Cincinnati, 1877; formerly a practitioner of Woodsville and Antioch, Ohio; died at his home near Barnesville, Ohio, March 3, from heart disease, aged 78.

James H. McLaughlin, M.D. Jefferson Medical College, 1864; Cincinnati College of Medicine and Surgery, 1873; died at his office in Braddock, Pa., March 13, from heart disease, aged 60.

Reuben Harrison Huddleston, M.D. Rush Medical College, 1872; for many years a resident of Miami, Fla.; died at his home, May 16, from cerebral hemorrhage, aged 74.

Robert Lawrence, M.D. University of Victoria College, Coburg, Ont., 1871; died at his home in Vancouver, B. C., March 19, from cerebral hemorrhage, aged 70.

James Wallace, M.D. University of Toronto, Ont., 1866; for more than thirty years a practitioner of Alma, Ont.; died at his home in that village, April 11, aged 78.

John Clement Parker, M.D. Medical School of Maine, Brunswick, 1891; a member of the Rhode Island Medical Society; died at his home in Providence, March 12.

Willie Waldo Hendershott, M.D. Rush Medical College, 1883; the first practitioner of Deer Park, Wash.; died at his home in Camden, Wash., recently, aged 54.

Thomas G. Gordon, M.D. Columbus (O.) Medical College, 1884; died at his home in New Philadelphia, O., February 11, from cerebral hemorrhage, aged 56.

James W. Waters, M.D. St. Louis Medical College, St. Louis, 1888; for twenty years a practitioner of Bachelor, Mo.; died in Reform, Mo., May 21, aged 46.

Israel C. Barlott, M.D. Long Island College Hospital, Brooklyn, 1872; of Hooversville, Pa.; died in the Johnstown (Pa.) Memorial Hospital, May 15.

William O. Eastwood, M.D. University of Toronto, Ont., 1853; coroner for the Whitby (Ont.) District; died at his home in Whitby, March 22.

Charles W. Unger, M.D. University of Halle, Germany, 1863; died at his home in Los Angeles, March 21, from valvular heart disease, aged 73.

Joseph H. Putnam, M.D. Bellevue Hospital Medical College, 1864; died at his home in Bridgeton, N. J., April 14, from senile debility, aged 80.

John Edgar Lundy, M.D. University of Toronto, Ont., 1897; died at his home in Portage la Prairie, Man., April 27, aged 38.

James Lester Carney, M.D. Long Island College Hospital, Brooklyn, 1888; died at his home in Brooklyn, April 22, aged 63.

Solomon C. McLean, M.D. Queens University, Kingston, Ont., 1874; died at his home in Spencerville, Ont., April 16, aged 66.

Lewis C. Schutt, M.D. Louisville (Ky.) Medical College, 1875; died at his home in Toledo, Ohio, May 21, aged 63.

Edward M. Small, M.D. Jefferson Medical College, 1871; died at his home in Eastport, Me., April 20, aged 66.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and Other Matter to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE "BUSINESS" OF FRAUDULENT MEDICAL PRACTICE

Advertising Specialists on the Pacific Coast

The "business" of medical quackery is run on much the same plan in all sections of the country. It has been shown[1] that the "United Doctors," operating largely in the central West and in the Eastern states, is a purely business and not a professional organization: it is owned and controlled by persons who hire cheap doctors to work the people. On the Pacific Coast, a similar system is operated by another concern, although the Western offices are not run under one firm name. In Seattle, Tacoma, Portland, San Francisco, Los Angeles, Oakland and Spokane offices are owned by two persons, H. J. Jiles and C. K. Holsman, but are run under various names. In Seattle, Dr. Cook & Co. was found to be a corporation with these men as the chief owners. They also own the Scott Medical Institute. In Tacoma, the office is run under the name of Dr. E. A. Severance. In Portland, where there are two offices, one is run under the name of Dr. C. K. Holsman. In the other cities they are run under the names of the men hired by Jiles and Holsman. When these doctors are changed from time to time the name of the office is likewise changed.

Recently in Seattle a campaign of exposure has been carried on by the Seattle *Sun*, a daily paper, assisted by the county medical society, the district attorney, and by various suits in the courts for recovery of money fraudulently obtained by these advertising doctors. Commenting on their methods, which are almost exactly similar to those of the "United Doctors," the Seattle *Sun* says:

"EMINENT SPECIALISTS" ONLY HIRED MEN

"It should be of interest to any person contemplating answering one of their alluring advertisements to know that the 'eminent specialist' is merely a salaried employee—a hired hand of a corporation—that as such he draws pay of from $30 to $50 per week out of an income of $500 to $1,000 per week brought to the corporation . . . It is not a profession; it is a business and a cold-blooded one, as most of those who have had dealings with it can testify."

HIRED MEN EXPECTED TO GET THE MONEY

According to the statement of one of the "eminent specialists" who was formerly in the employ of Jiles and Holsman, and who became disgusted with the business, the expenses of one of their offices for equipment, salaries, drugs and supplies and advertising bills amount to from $1,500 to $1,800 per month, about half of which usually goes to the newspapers for advertising. The "eminent specialists," as hired men, are expected to make money for their employers and are given definite instructions to that effect. They are told to find in each patient the most serious malady they can and to obtain the largest possible fee for the treatment and continue it as long as the patient will stand for it. No prospective patient must be allowed to escape who comes for "free consultation." The value of these hired specialists to the concern is their ability to get money, and in Seattle it is said that one office has shown a profit of not less than $200 per month above expenses and sometimes as high as $2,000. The seven offices operated by Jiles and Holsman are said to return a profit of from $5,000 to $10,000 per month out of the readers of daily newspapers who have been lured into the advertising doctors' offices.

"FREE CONSULTATION" BAIT

The manner in which these concerns take advantage of people who come to their offices under the bait of "free consultation" is graphically set forth in a series of stories in the Seattle *Sun* by a reporter who was sent to the offices of Drs. S. S. Johnson, J. Eugene Jordan and H. P. Wilkins. This young man after being pronounced physically sound and perfect by two regular practitioners of Seattle, after a thorough examination, went on successive days to the offices of the three quacks named. In each instance he complained simply of a backache about which he told them he was "worried." Without making anything in the nature of a thorough examination, the suggestion of "worry" was immediately seized on by the quacks, who proceeded to try to inspire the young man with terror as to his condition and the awful consequences which would ensue unless he took their treatment at a substantial fee. The manner in which the quacks proceed to inspire terror into the hearts of their victims who are "worrying" is described by the reporter, as follows:

INSPIRING TERROR IN THE VICTIM

"Worry! That word 'worry,' that's it. It will get you anything the 'free consultation' room has in stock. Worry, w-o-r-r-y. That's the mental state that breaks down your defenses; that fans the slumbering worry-embers until flames leap out of them — flames that turn the brain hot; set streams of perspiration running down your body; that eat into your heart; scorch your courage; incinerate every vestige of hope in the human breast; that shrivel your strength, and wither your nerves.

"You go to the 'free consultation' room after your imagination has whipped your mind into horror. Submitting, you go into the room with mock defiance; chin up and shoulders thrown back. You come out beaten. You have a bottle under your arm. You don't exactly know what's wrong with you, but you know that the bottle holds the 'cure' for what you have got. The terror that capitalizes 'free consultation' is in you; the day looks gray. You are ready to sink under the gloom of hopelessness."

ALASKA MINER SWINDLED

Some of the practical results of the "free consultation" methods are revealed in the case of an Alaska miner named Emil William Nelson who was lured into the offices of Dr. Cook & Co., owned by Jiles and Holsman, where he was made to believe that he was seriously ill and required a number of surgical operations. When it was learned that Nelson had about $3,000 in one of the Seattle banks he was induced by the most shameless misrepresentations to pay to Dr. Cook & Co. $2,287.50. Later when Nelson woke up to the fact that he had been swindled, he employed a lawyer to get back his money. It took a fight to do it, and also three detectives to secure enough evidence to make the fight successful. The evidence indicated that Dr. Cook & Co. was a corporation and that the stock was held by C. K. Holsman and H. J. Jiles as stated. When the court found that the concern was incorporated it was held that a corporation could not hold a license to practice medicine and judgment was rendered for the plaintiff. Nelson managed to recover most of his money after selling out the offices of Dr. Cook & Co., who immediately opened the offices again under the name of Dr. H. P. Wilkins, who was employed to run it. In another lawsuit, according to the Seattle *Sun*, Dr. S. S. Johnson, who was one of the quacks consulted by the reporter for the *Sun*, was required to pay back $35 to a patient from whom that sum had been extracted at a "free consultation." In this instance the suit was not brought against Dr. S. S. Johnson, in whose name the office is run, but against R. M. Griebel. The lawyer for the defendant would not explain who the R. M. Griebel was, but it was admitted that Dr. Johnson was merely the hired man for the real owners of the office.

VAST SUMS SPENT ON QUACKS

In commenting on the practice of these quacks, the Seattle *Sun* said:

"It would be impossible to estimate the total of the vast sum of money annually abstracted from the pockets of Seattle people by advertising doctors and patent-medicine fakers who sell their nostrums through a working alliance with the daily newspapers, but it is certain that the larger part of this sum is taken from the poorer class of people of the community, including many unfortunates who are nigh unto death and are spending all the money they have under the delusion, fostered by the cure-all doctors, that they can be fully restored to health."

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[1] The Journal A. M. A., March 1, 1913, p. 682.

A CLEANUP PROMISED

In Washington a law has been enacted providing for the prosecution of persons who publish untrue, deceptive or misleading advertisements. The prosecuting attorney of the county in which Seattle is located has given it as his opinion that these advertising quack specialists can undoubtedly be reached under the law and driven from the city, and he expresses it as his intention to undertake prosecutions when the law becomes effective in June of this year. The work of the Seattle *Sun* in thus exposing quack organizations similar to that of the "United Doctors" in the central West, deserves the highest praise. It is understood that the *Post-Intelligencer*, another leading paper of Seattle, has recently adopted the policy of excluding from its advertising columns all fraudulent medical advertising.

DRUG DETERIORATION

The Wayne County (Michigan) Medical Society recently appointed a committee to cooperate with a similar committee appointed by the Detroit Retail Druggists Association to investigate the question of deterioration of drugs. Dr. W. J. Wilson, Jr., of Detroit, calls attention to this fact and sends a copy of the report:

> The Committee on Drug Deterioration appointed by the joint meeting of the Detroit Retail Druggists Association and Wayne County Medical Society would respectfully report:
>
> Recent investigations of the fluidextracts show that with few exceptions they retain their potency for a number of years when kept under proper conditions; that is, without access to air, or exposure to light.
>
> With such drugs as hydrogen peroxid in which the absolute limit of potency is eighteen months, and the probable limit from six to twelve months, we would recommend that the manufacturers state on the label the date of manufacture as well as the limit of potency.
>
> We would recommend that the practice of keeping all liquid preparations, such as tinctures and fluidextracts which deteriorate on exposure to light, preferably in light-proof cupboards, or in amber-colored bottles not exposed to direct sunlight, with the usual precautions of a tight-fitting and air-proof stopper, be made universal.
>
> We would also recommend that the subject of drug deterioration be made one of the leading topics for discussion in all the state and national pharmaceutical and medical societies in the meetings of the near future.

Correspondence

Books Needed by Dayton Physicians to Replace Those Destroyed by the Flood

To the Editor:—There have been many loyal offers of help to the physicians who have been sufferers in the late flood. There were about one hundred in Dayton who were losers to a greater or less extent. On some it has worked an almost ruinous hardship, but so far as I know there has been no one seeking personal aid.

The medical profession responded with its characteristic promptness, courage and efficiency to the call of duty in the great disaster that overtook us, and did noble work. This goes without saying, for when did the medical profession ever fail at the call of humanity? So we are not pleading for personal help, or special sympathy, or for recognition of any duty done; but the members of the Montgomery County Medical Society did suffer a loss which impaired their professional efficiency very materially, to which the society has appointed me to call your attention.

The medical department of our public library was a complete loss. Not a single book was saved. There were in the library more than sixteen hundred new and standard medical works, making a good, practical working and reference library that was very valuable to the profession. Now that so many physicians have lost all their private libraries, and in many instances cannot for obvious reasons replace them for a long time, such a public library would be more valuable than ever—is in fact, almost a necessity to an unimpaired professional efficiency.

Therefore the society has thought that it might without a lowering of dignity ask you to call this public loss of the Dayton physicians to the attention of those of the profession who may be in a position to make library contributions, and of the medical publishers, who have always found us liberal patrons, and to ask their cooperation in building up this department of our library. We believe that it will be necessary only to make our need known.

All communications in regard to the matter may be addressed to Dr. W. J. Conklin, 17 East First Street, Dayton, Ohio, who is chairman of the Library Committee of the Society and president of the Library Board of the Public Library. In order to avoid duplications, those who wish to contribute books should first send the titles, and wait for an answer. Horace Bonner, M.D., Dayton, Ohio.

[An editorial comment will be found in this issue.—Ed.]

Cooperation in Medical Practice

To the Editor:—Why should not the group-unit, which is so plainly the chief efficiency factor in industrial and commercial enterprises be the same in medical practice? Could not small groups of medical men, specializing or semispecializing, achieve far greater results, primarily for the patient and, secondarily, for themselves?

The day of the patriarchal, almost parental, "all-round" family practitioner is passing, if it has not already passed.

The evolution of civilized needs, the vast advances in every department of medical science, render it impossible for any one man to keep abreast of progress, even to form a symmetrical conception of present-day knowledge. These have produced new aspects of supply and demand. Giants of science who are familiar with essentials in certain departments and are capable of long perspective and deep penetration into mysteries rarely assume responsibilities of family practice; a few undertake consultations in limited clinical fields.

Every graduate of a reputable medical school must have qualified in certain uniform directions. Yet how many fall out of the ranks and turn to other pursuits, often successfully enough! The essential condition for success has been defined by Arnold Bennett as, in the final count, "an insatiable appetite to succeed." This may be conditioned on divers qualities, among which is always consistency in the will to achieve. This also probably depends on some freedom in choice of direction for effort.

Does the practice of medicine always furnish a fair ground for freedom of choice? To one of overmastering impulse, yes; but not unless that impulse has opened to it liberalities in the field of opportunity common to the broader avenues of competition outside of a profession so nicely poised on ethical grounds as is medicine.

The essential purpose of the apostle of medicine is to guide the human being, whether in or out of health.

One man can furnish one group of capabilities, another a very different one, and no man should be expected to do first-class work in domains for which he is not fully qualified. Give each one his particular work to do and he will make good. The work coming to him in which he is not interested or trained should be shared with others on an equitable basis. In the larger cities this is accomplished by consultations. When conditions to be met are clearly defined, the difficulties are small; but they exist and must be met, chiefly by forming a public opinion that mutual helpfulness among physicians is absolutely necessary in the best interests of the patient.

We are constantly confronted with perplexities based directly on the erroneous, archaic notions of medical practice which certain outworn traditions have kept alive. There is too much *laissez faire*, "let well enough alone," and not a little culpable moral timidity.

There are few of us who have not been told by our most cherished and attached patients that we ought to attend to one or another specialized problem ourselves; that they "do not like to be turned over to some one else." Thereupon too many worthy practitioners play the fool; strive to cover too large a territory; assume responsibilities outside of personal capabilities, and thereby come to grief; whereupon the patient, taking counsel with a shrewd neighbor, promptly leaves us.

A plan which is simple and promises much efficiency for all concerned is this:

In any small community of about fifteen or twenty practitioners, there will be found those who are better qualified by inherent aptitudes, acquired skilfulness, experience, taste or office equipment to render special service; for instance, in departments of surgery, in electrotherapeutics, especially in roentgenology, now so imperative in diagnosis; or in expert diagnostic methods for the heart, lungs, skin, etc.; in short, in many ways to cooperate with his colleagues to the best interests of all concerned, especially the patient.

Let there be a well-defined basis of fees for this semispecialism—to which few patients will object. They can be educated to realize the advantage to themselves. Or, if circumstances warrant it, when there are, say, twenty-five or fifty doctors near each other, let them form partnership groups, each treating all the patients who apply to him and yet cooperating in specialized lines.

Individual independence can be maintained, if desirable, except as described. Then, whoever specializes or semispecializes can well afford to purchase equipment and spend time and money in centers of learning.

The outworn idea that any one man is capable, or should be expected to be capable, of being an all-round expert in conserving the physical and moral welfare of the community is sheer folly. To persist in encouraging people to think so encourages all sorts and conditions of charlatans, breeds discontent, strife and evil-speaking, alienates friends, jeopardizes efficiency and imperils human lives.

The group-unit, judiciously evolved, will go far toward raising the index of efficiency of the medical profession. Above all, it will raise to a most desirable position of advantage the professional potential, to well-deserved confidence, honor and esteem in the community.

J. Madison Taylor, M.D., Philadelphia.

The Rattlesnake-Venom Treatment of Epilepsy

To the Editor:—In The Journal for March 29, 1913, appears an editorial on "The Rattlesnake-Venom Treatment of Epilepsy," which, although chiefly aimed at another worker on this subject, is, in many instances, so manifestly unfair that I, who am wholly responsible for the origination of this method of treatment, cannot allow it to stand without a protest.

In the first place, you seem to think that the essential feature in the setting aside of the epileptic seizures by crotalin resides in the injurious shocks and "severe reactions" which are incidental to its injection. Nothing could be farther from the truth. It is a fact that when the drug was first injected it was given in larger doses than have since been shown to be necessary to produce the desired results; but that it is absolutely indispensable to call forth a profound local or general reaction is not true, and against this I have protested for more than two years. It may be regarded as a safe working rule that the reaction at the seat of injection, or throughout the body, bears no vital relation to the best effect of the drug. Extended experience points out that it is always desirable to begin with small doses in all new cases, and to increase them gradually as immunity becomes established.

The second objection which you offer is the fear that adventurous experimenters ignore the fact that "all snake venoms have a hemolytic power." This might be serious if it were wholly true, but it is one of the half-truths that have done duty before in the defense of extravagant statements. If snake venom is hemolytic, so are the cyanids, the only difference being that this action is much more accentuated in the latter than in the former; but I hope that this is no reason for excommunicating them from the non-official formulary, if they ever found a place therein. The same action is also characteristic of phosphorus, mercury and other medicinal agents; yet, from last accounts, they have not been Jonahized by the Council on Pharmacy and Chemistry. The real truth is that neither snake venom nor the other agents here named have been proved to be destructive to the blood in minimum doses.

Third, you apprehend that venom injections may surreptitiously hide some dangerous germs in their meshes, and thus pave the way for fearful pyogenic infection. This is a mere surmise, resting on an extremely flimsy basis; for, among the more than six thousand injections of this drug, I have yet to meet my first case of this kind.

Fourth is the hasty claim that before snake venom is employed "in human beings" it should be subjected to "careful animal experimentation" and "be accurately standardized." If you know of any drug that has undergone a more vigorous, protracted and extensive scrutiny at the hands of expert investigators, I should like to hear of it; and, if you have any doubt about the snake being less capable of standardizing its venom than the official standardizer, you should make a series of tests, at certain intervals, with five or six equally large doses of the natural venom, abstracted from different snakes of the same species. Rattlesnake venom, of whatever source, retains an unimpaired activity for a long time. I have found that, when kept in a dry state for twenty years, it is just as powerful as that which was ejected freshly at the end of that period.

Finally, with a great deal of earnestness, you expatiate on the well-known fact that epilepsy is sometimes temporarily arrested by shock, high infectious fever, surgical operations, injuries, etc., and then, presuming on the credulity of your reader, you share with him the profound secret that in the dark ages traumatism was applied as a remedy for "falling-fits," whether by decapitation or by less sanguinary methods you fail to state; but you console yourself with the thought that the benefit which epileptics are said to experience from the action of snake venom is, after all, more apparent than real.

On the one hand, you bring what you undoubtedly believe to be a series of overwhelming charges against snake venom as a remedy for epilepsy, of which not one stands the test of even a cursory examination, making it certain that if it ever shall be shown that snake venom is useless in relieving epilepsy it will not be on account of any of the before-named imputations. On the other hand, a set of men, all of whom are well-known practitioners of a professional standing as high as your own, who are fully as able to distinguish between the false and the true in therapeutics, consider it a sacred hippocratic obligation to save life and lessen suffering whenever they can, even though they are compelled to step outside the rock-worn restrictions of the non-official formulary; they are interested in snake venom, not as a cure-all for epilepsy, but as an agent which, by further clinical investigation, may be found to possess the power of giving permanent relief to many of these sufferers who are even admitted by you to be "too commonly helpless."

Thomas J. Mays, M.D., Philadelphia.

[Comment.—Nothing in Dr. Mays' protest alters the scientific facts on which the editorial was based, and it is not the purpose of this reply to enter into polemics to support them. There is another phase of the matter which can now be elaborated.

While Dr. Mays comes forward as the spokesman and champion of Spangler's rattlesnake-venom treatment of epilepsy, we can hardly believe that he stands ready to defend the lay press write-ups by which this hazardous therapeutic experiment has been promulgated and commercialized. Except that the subject is one of less general interest, its sensational publicity has been on a par with that of Shafer's Phylacogens and Friedmann's tuberculosis treatment. Through it, victims of incurable epilepsy have been led to submit themselves to a method of therapeutic experiment wholly empiric and fraught with just such dangers as our editorial indicated. Physicians otherwise conservative, through the importunities of patients aroused by these newspaper accounts, have been led to test Spangler's treatment, and it is on the basis of such trials by competent epileptologists that we condemned the method and cautioned the profession against its adoption.

Dr. Mays' letter gives the opportunity of protesting again against the tactics by which the crotalin treatment of epilepsy has been forced into public notoriety.—ED.]

Prescribing Proprietaries, and Managing the Detail Man

To the Editor:—The professions of medicine and pharmacy are distinct, and the best results are obtainable only when the physician and the pharmacist each attends to his own business and the two work in harmony. As the result of the activities of our pharmacologic society, composed of physicians and pharmacists, the conditions in Evanston are a surprise to visitors to our city. The use of proprietary medicines is reduced to a minimum. Still further to reduce the nuisance of the detail men and their samples, at the last meeting a committee was appointed, consisting of one physician and one druggist, *to whom detail men must present their case before they will be received by the other members.* Exploiters of proprietary mixtures will be refused endorsement, as will those also who have been involved in doubtful financial transactions in the past. Would it not greatly aid the general condition if the Evanston example should be generally copied through the country?

HENRY B. HEMENWAY, M.D., Evanston, Ill.

[COMMENT.—The Evanston method of dealing with the proprietary question indicates that the physicians of that town are alive to their responsibilities. W[illegible]t not be simpler and just as efficient, how[illegible] to acc[illegible]dings of the Council on Pharmacy and Chemistry as consti[illegible]dentials for the detail man? Many physicians are u[illegible] New and Nonofficial Remedies for just this purpose.—ED.]

Needed Reorganization of the Indian Medical Service

To the Editor:—I have read with a great deal of interest Dr. Wimberly's letter to THE JOURNAL (May 17, 1913, p. 1558), and in most respects agree with his exposition.

During the last year the Medical Association of the United States Indian Service has been formed and has appointed a committee to draft a bill for introduction in Congress either for our amalgamation with the Public Health Service or for the organization of the medical work among the Indians along the same lines. Conditions at present are deplorable in the extreme, not only for the Indians and the physicians concerned, but for the public at large. When over 20 per cent. of the Indians have trachoma, in Oklahoma over 68 per cent., how long will it be before the white settlers around and on the reservations also become infected? Owing to its antiquated methods of handling hygienic and sanitary questions and the restrictions imposed on the physicians, the Indian Office has shown its utter inadequacy to deal with the problems involved.

The physicians in the Indian Service are, I believe, fully as capable as the ordinary practitioner on entering the service. They are selected by a competitive civil service examination and must possess the same qualifications and pass the same examinations as physicians for the Isthmian Canal Service, Coast and Geodetic Survey, Reclamation Service, Philippine Service, etc., and the Indian Service physicians receive only from $1,000 to $1,200 a year whereas the others enter at $1,800. After assignment to the reservation, they find in many instances no quarters or quarters unfit to live in; *no* means of transportation or an old worn-out team or saddle pony with which they are supposed to cover several hundred square miles of territory. Not only that, but every act is subject to the superintendent's wishes. The teams they drive, the drugs they purchase, the quarters they occupy, their chances of increase in salary or promotion of any sort depend on his whims. Some of the superintendents are anxious to improve conditions but are either lacking in funds or fear to antagonize the Indians, while others lend as little support as possible. The reservations are so large that it is impossible often to give an acute case the attention it really deserves; besides, there is often much antagonism on the part of the Indian to treatment by white physicians.

Most of our work should be along sanitary and hygienic lines. This would require not only a larger allowance for medical work but also a complete reorganization of the Indian Medical Service. It should be separated from lay control entirely, some one skilled in medical science placed at the head and then organized along the lines of the Public Health Service or Medical Corps of the Army and Navy. Better still from economic reasons would be its union with the Public Health Service, where it in reality belongs.

C. W. LANE, M.D., Lincoln, Wash.
Secretary and Treasurer, Medical Association of the United States Indian Service.

Limited Usefulness of Fish in Destruction of Mosquitoes

To the Editor:—In THE JOURNAL, May 3, 1913, p. 1348, there is an item on a small fish, native of Barbados, called commonly "millions," which is used in the Cape Province, South Africa, for the destruction of the larvae of anophelines as one means of combating malarial fever. Similar experiments with the same species of fish, from Barbados, were carried on in the Canal Zone by the Sanitary Department of the Canal Commission three years ago. The method was found to be applicable only to small permanent collections of water unsuited to drainage or oiling. The fish are so small that they easily become prey of larger fish in streams and pon[illegible] and the smaller collections of water are treated by oiling or drainage. For these reasons the value of this method of mosquito destruction is limited.

ALFRED G. FARMER, M.D.
District Physician, Gatun, C. Z.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CRITICISM OF A PRESCRIPTION FOR "LIVER TROUBLE"

To the Editor:—Please criticize the following prescription, which I am informed was given after a diagnosis of "liver trouble":

℞	Resorcin	ʒ iss
	Acid borac.	ʒ i
	Sodii bicarb.	ʒ ii
	Tinct. nuc. vom.	ʒ iii
	Syr. ipecac.	ʒ i
	Fl. ext. rhubarb	
	Fl. ext. hydrast.	āā ʒ iiss
	Elix. digest. comp.	ad ℥ iv

M. Sig.: Teaspoonful after meals.

JAMES WILTSE, M.D., Brewster, N. Y.

ANSWER.—Our correspondent's implied criticism of the prescription fits the diagnosis. We might say that the diagnosis seems to us appropriate. It is rather characteristic of the type of mind that is satisfied with an indefinite diagnosis like "liver trouble," to attempt to cover possible therapeutic indications by a monstrosity of polypharmacy. Aside from the impropriety of combining so many ingredients in one prescription, there are several obvious chemical incompatibilities. The mixture of sodium bicarbonate and boric acid in a solution would result in the formation of carbon dioxid and a salt of sodium — a borate. The antiseptic power of the boric acid is considerably reduced by such a reaction. The combination of an alkali like sodium bicarbonate with a compound of strychnin is likely to give rise to a serious incompatibility. In this case it is probable that the strychnin might be held in solution by the alcohol in the tinctures and fluidextracts, but the possibility of a precipitation should always be kept in mind. While bicarbonates do not immediately precipitate strychnin, there is a chance of a gradual separation of carbon dioxid, converting the bicarbonate into a carbonate which may produce precipitation of strychnin to the extent that a fatal dose is given at the last. Elix. digest. comp. is an entirely superfluous component of the prescription so far as therapeutic value is concerned.

REMOVAL OF BIRTHMARKS

To the Editor:—Under my care I have a girl 5 years old who has a birthmark on the dorsal surface of the wrist and a portion of the hand. The skin is of a deep brownish color, indurated and is quite hairy. What is the most approved method and what is the most practical technic for removing this mark?

J. F. Riordan, M.D., Berlin, Wis.

Answer.—The best method of treating such pigmented hairy nevi is by repeated freezings over the area with solidified carbon dioxid (after the method introduced by Pusey). Areas not larger than ¾ inch square can be frozen at one application; if the area to be treated is large, it can be frozen by repeated applications to adjacent areas at one sitting. It is well to begin with applications not longer than twenty seconds and increase their length to thirty, forty or sixty seconds at later sittings if it should be found necessary. A series of treatments at intervals of a few weeks—from three to eight—may be necessary to attain the greatest possible improvement. It is better to do too little at each treatment and repeat the treatments than to proceed too vigorously and produce an unnecessary amount of scarring. With care, patience and intelligence even large pigmented nevi can be almost entirely removed with little scarring.

Before freezing a hairy nevus the hair should be shaved off or clipped very close, and as a precaution the surface washed with an antiseptic solution. The pain of the applications is slight; a 5-year-old child will usually stand a treatment without resistance, if not too many areas are frozen at one time. The frozen area swells like a mosquito-bite or a bee-sting; the disappearance of this swelling can be hastened by bathing in hot or cold water. Bathing also diminishes the evanescent discomfort following the freezing.

AUTOGENOUS VACCINE THERAPY IN EPIDEMIC OF TONSILLITIS AND ACUTE ARTHRITIS

To the Editor:—This community has been infested this year with a lot of infectious tonsillar trouble, which manifested itself later in a great deal of infectious joint troubles. What bacterin might possibly be advantageously used?

Charles H. Starkel, M.D., Belleville, Ill.

Answer.—Smears of the throat should be taken and the micro-organism which seems to be the cause of the disease should be obtained in pure culture. In the case referred to it would be well to look for streptococci, as these have been the cause of a number of epidemics of sore throat recently reported. An autogenous vaccine should be made from the organism which seems to be the cause of the trouble. It has been shown that such epidemics are spread through the milk-supply; therefore this should be carefully investigated. The following references indicate the importance which this subject has assumed within the last two years:

Milk-Borne Tonsillitis, editorial, The Journal, Nov. 11, 1911, p. 1618.
Davis, D. J., and Rosenow, E. C.: An Epidemic of Sore Throat Due to a Peculiar Streptococcus, The Journal, March 16, 1912, p. 773.
Hamburger, L. P.: An Epidemic of Septic Sore Throat in Baltimore and Its Relation to a Milk-Supply, The Journal, April 13, 1912, p. 1109.
Stowell, E. C., and Hilliard, C. M.: Comparison of Streptococci from Milk and from Human Throat, *Am. Jour. Dis. Child.*, May, 1912; abstr., The Journal, June 22, 1912, p. 1997.
Capps, J. A., and Miller, J. L.: The Chicago Epidemic of Streptococcus Sore Throat and Its Relation to the Milk-Supply, The Journal, June 15, 1912, p. 1849.
Davis, D. J.: Bacteriologic Study of Streptococci in Milk in Relation to Epidemic Sore Throat, The Journal, June 15, 1912, p. 1852.
McKinney, R.: Streptococcus Infections of Throat, *Southern Med. Jour.*, June, 1912.
Luetscher, J. A.: Bacteriology of Epidemic Sore Throat, The Journal, Sept. 14, 1912, p. 869.
Heinemann, P. G.: The Epidemic of Sore Throat in Chicago, The Journal, Aug. 31, 1912, p. 716.
Capps, J. A.: The Rôle of Milk in the Causation of the Chicago Epidemic of Sore Throat, The Journal, Nov. 9, 1912, p. 1715.
The Clinical Manifestations of Epidemic Sore Throat, editorial, The Journal, Nov. 23, 1912, p. 1894.
Rosenow, E. C.: Study of Streptococci from Milk and from Epidemic Sore Throat and the Effect of Milk on Streptococci, *Jour. Infect. Dis.*, November, 1912; abstr., The Journal, Dec. 21, p. 2286.
The Source of the Streptococci in Epidemic Sore Throat, editorial, The Journal, Jan. 4, 1913, p. 51.
Hamburger, L. P.: Baltimore Epidemic of Streptococci or Septic Sore Throat and Its Relation to Milk-Supply, *Bull. Johns Hopkins Hosp.*, January, 1913.
Stowell, E. C.: Hilliard, C. M., and Schlesinger, M. J.: Statistical Study of Streptococci from Milk and from Human Throat, *Jour. Infect. Dis.*, March, 1913; abstr., The Journal, April 5, 1913, p. 1106.

The close relation of tonsillitis to acute arthritis (acute rheumatism) is now well recognized. It is probable that the tonsil forms the port of entry for the infecting organism. The following recent articles may be referred to in connection with this subject:

Schichhold, P.: Tonsillectomy in Treatment of Rheumatism and Other Infections, *München. med. Wchnschr.*, Feb. 8, 1910; abstr., The Journal, March 19, 1910, p. 1016.
Pickenbach: Importance of Tonsillitis in Etiology of Acute Rheumatism, *München. med. Wchnschr.*, April 5, 1910.
Hess, K.: Importance of Tonsil Region in Relation to Acute Articular Rheumatism and Heart Disease, *Med. Klin.*, Nov. 21, 1910.
Higgs A. K.: Relation Between Diseased Tonsils, Rheumatic Fever and Heart Disease, *Northwest Med.*, November, 1911; abstr., The Journal, Dec. 9, 1911, p. 1944.
Symposium on Chronic Focal Infections: Their Relation to Disease of the Heart, Kidney and Joints, The Journal, Dec. 30, 1911, p. 2169.
Billings, F.: Chronic Focal Infections and Their Etiologic Relations to Arthritis and Nephritis, *Illinois Med. Jour.*, March, 1912; abstr., The Journal, Dec. 30, 1911, p. 2169.

LITERATURE ON PURIFICATION OF DRINKING-WATER

To the Editor:—I am desirous of obtaining some information in regard to the sterilization of drinking-water, and should be greatly indebted to you if you would refer me to any literature describing the various methods which are used in the United States.

F. E. C., New York.

Answer.—Following is a list of recent articles on this subject:

The Purification of Water with Bleaching-Powder, editorial, The Journal, Oct. 16, 1909, p. 1293.
The Purification of Water by Hypochlorites, editorial, The Journal, Aug. 20, 1910, p. 699.
Chamberlain, W. P.: Effect of Ultraviolet Rays on Amebae: Use of These Radiations in Sterilization of Water, Philippine Jour. Sc., November, 1911; abstr., The Journal, March 23, 1912, p. 892.
Cooper, A. T.: Some Tests of the Efficacy of Chlorinated Lime in Purifying Drinking-Water, Military Surg., May, 1912; abstr., The Journal, June 8, 1912, p. 1817.
The Increasing Use of Calcium Hypochlorite in Water Purification, editorial, The Journal, Jan. 27, 1912, p. 279.
Stokes, W. R., and Hachtel, F. W.: Some Results of the Treatment of the Baltimore Drinking-Water by Calcium Hypochlorite, The Journal, Oct. 26, 1912, p. 1505.
Scharff, M. R.: Experiments on Disinfection of Water with Ultraviolet Light, with Laws of Disinfection, Jour. Infect. Dis., May, 1912.
Clemesta, W. W.: Use of Ultraviolet Rays in Sterilization of Water, Indian Med. Gaz., July, 1912.
Powell, S. T.: The Water-Purification Works of the Baltimore County Water and Electric Company, The Journal, Sept. 14, 1912, p. 875.
Hering, R.: Methods of Water Purification of Large Cities, The Journal, Feb. 8, 1913, p. 411.
The Hypochlorite Treatment of Water-Supplies, editorial, The Journal, Jan. 18, 1913, p. 211.

MUCH-HOLZMANN PSYCHOSIS TEST—WEIL COBRA VENOM TEST—NOGUCHI BUTYRIC ACID TEST

To the Editor:—1. What is the Much-Holzmann psychosis test?

2. What is the Weil cobra venom test for syphilis?

3. In Noguchi's "Serum Diagnosis of Syphilis," p. 157-159, instructions are given that in using the Noguchi butyric acid test on the cerebrospinal fluid one should boil the mixed reagents and spinal fluid. In the directions for using the butyric acid method with the blood-serum no mention is made regarding the heating of the precipitated globulin, dissolved in the normal salt solution, to which the butyric acid is added. Is it necessary to boil the reagents in testing the cerebrospinal fluid and not in case of the blood-serum?

Edwin E. Hutshing, Napa, Cal.

Answer.—1. The Much-Holzmann test is a test used for the presence of dementia praecox. It consists in the use of cobra venom together with red blood-cells. The cobra venom causes a hemolysis of the red blood-cells in the absence of dementia praecox. If the serum of a patient with dementia is added to the mixture of the cobra venom and red blood-cells the hemolysis is almost completely inhibited. (See article by Much and Holzmann, *München. med. Wchnschr.*, May 18, 1909, p. 1001. Also A. J. Rosanoff: The Much-Holzmann

Serum Reaction in Insanity, *Arch. Int. Med.*, October, 1909, p. 405.)

2. The Weil cobra venom test for syphilis is essentially similar. The technic of this test is described in The Journal, April 19, 1913, p. 1247.

3. The reason that heat is not applied in the case of the test of blood-serum by means of butyric acid is that the amount of globulin is here much richer than in the cerebrospinal fluid, and the reaction takes place with sufficient rapidity without the aid of heat. In cases, however, in which one deals with a very much smaller quantity of the blood-serum. it is helpful to heat it.

It should be noted that a recent query referring to the luetin test as the Noguchi skin test was incorrectly answered in The Journal, March 29, 1913, p. 1016. The mistaken assumption was made that the query referred to the Noguchi modification of the Wassermann test. Luetin is still prepared by Dr. Noguchi exclusively.

MORPHIN AND HYOSCIN (SCOPOLAMIN) IN LABOR

To the Editor:—Please inform me in regard to the use of morphin and scopolamin hydrobromid hypodermically in confinement cases. Is it perfectly safe, and if there are objections, what are they? Is there any objection to this more than to morphin and atropin?

H. B. Fitts, M.D., Provincetown, Mass.

Answer.—Scopolamin (hyoscin) and its salts are nearly allied in origin and composition to atropin. The chief difference between them is in their physiologic and therapeutic action on the central nervous system. Atropin in moderate or therapeutic doses is somewhat of an excitant. Scopolamin is rather a sedative or depressant. For this reason atropin is antagonistic to morphin and is therefore employed to counteract the analgesic effects of morphin on the respiratory centers. Scopolamin is a cerebral sedative and hence in regard to its action on the nervous system a synergist to morphin.

A few years ago it was proposed to use morphin and scopolamin in labor and give a sufficient amount to render and keep the patient in a semiconscious state *(Dämmerschlaf).* This plan was tried out in several German clinics but seems to have been generally abandoned. The objections to it have been danger to the child and disturbance of normal labor.

WHISKY BLENDS

To the Editor:—I want certain information concerning the pure food act as it relates to the blending of whisky. On good authority, I stated to a group of university club young men—some lawyers—that a blend was a fraudulent device, though authorized by a ruling of Mr. Taft. The article is a mixture of a little good whisky, cheap alcohol, vegetable extracts and coloring matter. The lawyers said that the government not only authorized the blend, but had a formula for it which was carried out in the mixture before it left the warehouse with the stamp of the government. This was news to me, and I hesitated to accept the statement. My understanding is that when whisky leaves the warehouse with the government stamp it is straight whisky—130 proof. That the practice of dealers and clubs is, on account of its strength, to reduce it about 30 per cent. with simple water, making the proof about 90, and in this condition it is bottled and government stamp put over the cork. This is not a blend, but the dishonest dealer adulterates it in the manner previously stated and then it is a blend. This is true, or there is no reason for the mixture. The plea that the fragrance and flavor are improved by the blend is simply a fraudulent device to deceive and to sell a cheap whisky at greater cost than a pure one. The latter can be flavored safely if necessary. Purity is no bar to it, certainly. There is much public misapprehension as to the law and the facts, and I believe an exposition in The Journal would be well received.

M.D., Denver.

Answer.—Under the Food and Drugs Act, the term "blend" is used to denote a mixture of "two or more like substances." In April, 1906, the Department of Agriculture issued a decision (F. I. D. 65), sometimes called the Roosevelt whisky decision, which declared, in intent, that "straight whisky" and "neutral spirits" were unlike substances. With this as a basis, it was ruled that:

> "Straight whisky will be labeled as such.
> "A mixture of two or more straight whiskies will be labeled blended whisky' or 'whiskies.'"
> "A mixture of straight whisky and ethyl alcohol, provided there is a sufficient amount of straight whisky to make it genuinely a 'mixture' will be labeled as compound of, or compounded with, pure grain distillate.
> "Imitation whisky will be labeled as such."

Naturally, this decision was not acceptable to certain of the whisky interests. The result was another decision issued in 1910 sometimes referred to as the Taft decision. According to this decision, straight whisky, rectified whisky, redistilled whisky and neutral spirits whisky are "like substances" and any of them may be labeled "whisky" without qualification. To quote from the decision:

> ". . . All unmixed distilled spirits from grain, colored and flavored with harmless color and flavor, in the customary ways, either by the charred barrel process or by the addition of caramel or harmless flavor, if of potable strength not less than 80 degrees proof, are entitled to the name whisky without qualification. If the proof be less than 80 degrees, i. e., if more water be added, the actual proof must be stated on the label and this requirement applies as well to blends and compounds of whisky" (F. I. D. 113).

Naturally, under this decision, mixtures of straight whisky with neutral spirits whisky may be labeled a "blend" because they are mixtures of "like substances." We believe that it makes no difference what the proportions are of the component parts in a "blend."

A mixture of straight whisky with alcohol derived from something other than grain, must be labeled a "Compound." The Attorney General decided, in December, 1908, that the amount of whisky in a "compound" must equal or exceed one-third in volume of the spirituous content.

PRESCRIBING THYMOL IN LIQUID PETROLATUM

To the Editor:—It is asserted that purified petroleum, or "liquid vaselin," is not emulsified or absorbed by the intestinal mucous membrane. If this is true, will you kindly inform me if there would be any danger in giving thymol dissolved in liquid petrolatum, provided, of course, that no other fats or oils were taken?

C. H. Wood, M.D., Glendora, Cal.

Answer.—So far as we can see, there would be no objection to prescribing thymol in liquid petrolatum. While the petrolatum would dissolve the thymol it would not tend to facilitate its absorption, because it is not itself absorbable and the thymol would need to pass through a watery liquid, in which it is only very slightly soluble, before it could reach the blood.

THE VERB "MASSAGE"

To the Editor:—Please state the correct verb to use in expressing the act of performing massage, and its proper pronunciation. For example, which of the following sentences is correct, and if both are correct which is preferable?

"The nurse was asked to masser (massay) the breast."
"The nurse was asked to massage (massazh) the breast."

Inquirer.

Answer.—The second sentence is correct. Massage is the verb in common use. Massé is used rarely. Masser, the French verb (of which massé is the past participle), is not used in English. The pronunciation has been indicated correctly by our correspondent. Massage is accented on the second syllable; the first a is short as in ran, the second a has the Italian sound as in alms, the s's are hissed, and the ge is sounded soft as the si in vision. Massé is accented on the second syllable and the é is pronounced like the a in ape.

REQUEST FOR SPECIMENS IN RESEARCH WORK ON THE SKULL

To the Editor:—I am doing research work on the topographic anatomy of the base of the skull. I desire specimens which do not conform to the generally accepted type described in text-books. If any physician who has such a specimen will send it to me, I will return it to him and give him credit in any monograph I may publish.

L. J. Genella, M.D., 922 S. Carrollton Avenue, New Orleans.

Miscellany

Communicable Diseases Among the American Indians

It has been known for some time that conditions of sanitation and public health among the American Indians are far from satisfactory. This knowledge has been emphasized in the reports of the Commissioner of Indian Affairs and commented on in The Journal at different times (Health Work Among Indians, editorial, The Journal, May 18, 1912, p. 1515; Health of the American Indian, editorial, ibid., March 15, 1913, p. 832); but no definite information was available as to the prevalence and seriousness of communicable disease among the Indians throughout the United States until the survey made last fall by the Public Health Service. This survey was conducted in accordance with an act of Congress of Aug. 24, 1912, appropriating $10,000 for a thorough examination "as to the prevalence of tuberculosis, small-pox, trachoma and other contagious and infectious diseases among the Indians of the United States," the final report to be made Feb. 1, 1913. This report was sent to the Senate, Jan. 23, 1913, by the secretary of the treasury (Senate Document 1038, Sixty-Second Congress, third session).

The investigation included an examination of the available data and records at Indian schools and agencies and of state boards of health, the examination of Indians in boarding-schools and reservations, the inspection of sanitary conditions having a bearing on the propagation of communicable diseases, and house-to-house visits on as many reservations as possible. The investigation extended from Sept. 28 to Dec. 30, 1912. In all, 39,231 Indians were personally examined, constituting approximately one-eighth of the total Indian population of the United States. Boarding-schools in twenty-five states were visited. The extent of this field of survey makes it probable that the results are typical for the entire Indian population, and that the conclusions drawn are accurate.

It was found that tuberculosis and trachoma are playing fearful havoc among the Indians, these being by far the most deadly diseases. Of the 39,231 Indians examined, 8,940 or 22.7 per cent. suffered from trachoma. At this rate about 72,000 Indians altogether are trachomatous. The disease is most serious in that it is a common cause of reduced physical and economic efficiency, mental retardation and actual suffering. The highest incidence of trachoma was found in Oklahoma, where it reached 68.6 per cent. In New York the lowest incidence was found of 0.2 per cent. A high rate was found also in Wyoming with 51 per cent.; Nebraska, 41 per cent.; Utah, 39 per cent.; Iowa, 32.04 per cent.; Nevada, 26.9 per cent.; Arizona, 24.9 per cent.; North Dakota, 22.9 per cent., and New Mexico, 22.3 per cent.

The Indian boarding-schools represent one of the most important agencies through which the federal government is seeking to educate and improve the condition of the Indian race. Hence it was considered that the incidence of trachoma in these schools was of the utmost concern. Data were collected from 133 of these schools with the following results: Among 16,470 pupils were found 4,916 cases of trachoma, or 29.8 per cent. The highest was in the Rainey Mountain School in Oklahoma, where 105 out of 114 pupils examined had trachoma, a percentage of 92.1. Throughout the Oklahoma Indian schools the average incidence of this disease was 69.1 per cent. Three schools alone, one in Wisconsin and two in New York, were free from trachoma. This was explained in turn by the absence of trachoma in the populations from which these schools drew their students. In 68 of the 133 schools the percentage of trachoma ranged from 25 to 90. It was found to be more generally prevalent in the schools than on the tributary reservations, and in non-reservation schools, groups of pupils from sections which were practically free from trachoma showed a high incidence of the disease. It is a fair inference that many students contracted the disease at such non-reservation schools and that they could easily spread it to new localities.

The situation in day schools is similar to that in boarding-schools. Of 3,488 day pupils examined, 752, or 21.5 per cent., had trachoma. In Arizona 41.3 per cent. of 990 Indian day schoolchildren were trachomatous. This was much in excess of the general rate for the state of 24.9 per cent. In New York 335 day pupils presented no cases of the infection. Trachoma was present in the Indian day pupils in all the states except New York. It would seem that the high incidence in the boarding-schools is due to the direct spread of the disease among the inmates.

Of 17,822 reservation Indians above and below the school age examined, 3,064, or 17.2 per cent., suffered from trachoma. In this class of Indians Oklahoma showed a trachoma incidence of 60.4 per cent.; Utah, 39.2 per cent.; Wyoming, 37.2 per cent.; Nevada, 36.5 per cent., and Montana, 30.7 per cent. In general trachoma was found most prevalent in Indians of school age, over half the patients being between 6 and 20 years of age, and it was slightly more prevalent in females than in males. Full-bloods were more prone to the disease than mixed bloods, but this is probably explained by the more prosperous condition and better living-habits of the latter.

The damage to vision from trachoma was marked. In a group of 23,560 Indians, 5,505 had trachoma and 527 had sustained serious damage to vision; 141 were blind in one or both eyes. This does not represent the total damage to vision from trachoma, as a large part of those examined were schoolchildren in whom the disease had not yet progressed far enough to produce serious complications. It is considered that 75 per cent. of untreated trachoma cases result in permanent injury to vision. It seems that trachoma has existed in the Indians in widely scattered sections for many years, but no reliable data could be obtained as to its actual origin or duration.

Trachoma has usually been considered a disease of immigrants from its known prevalence in Russia, eastern Germany, parts of Austria-Hungary, and in Italy, Greece and Spain. But it has only lately been considered as possessing dangerous endemic foci in the United States. The recent work of McMullen in Kentucky (see Trachoma in the United States, editorial, The Journal, Nov. 30, 1912, p. 1978), who found 12.5 per cent of 3,974 persons examined to be trachomatous, of Foster and Krulish in Alaska, and the present survey of the American Indians serve to show the true situation.

The reports on the prevalence of tuberculosis probably give a considerable underestimate of its real incidence because the examiners were forced by the exigencies of time and territory to examine physically only suspects, and because much of their work was done in the boarding-schools, from which tuberculous children are excluded. The result was the finding of an artificially reduced prevalence in a proportionately large group of Indians, but even so tuberculosis shows a wide incidence. The infection was more common in the primitive and less civilized Indians, as among the Nevada Piutes, with a rate of infection of 32.6 per cent. Certain Oregon reservations were highly affected, as the Siletz reservation with 24.5 per cent., Klamath Lake with 20.2 per cent., Umatilla with 20.6 per cent., and Warm Spring with 22.7 per cent. New York had the lowest state incidence with 1.2 per cent. These Indians are prosperous and live very much like their rural white neighbors.

In the north and northwest the incidence of tuberculosis ranged from 15 per cent. among the Sac and Fox Indians of Iowa, and 12.1 per cent. among the Montana Indians, to 2.3 per cent. in Michigan. In the southwest the highest incidence was shown by the Jicarilla Apaches of New Mexico and the Walapais of Arizona with 9.4 per cent. and 14.9 per cent., respectively. The well-fed and prosperous Navajo and Zuñi tribes of New Mexico had a low incidence. In New Mexico 1,225 Indian schoolchildren were tested by the von Pirquet tuberculin reaction, with a great variation in percentage of positive results in different tribes. Among the Jicarilla Apaches 95.5 per cent. of the children over 11 years of age gave positive reactions. On the other hand, the percentage of positive reactions in the Taos Indian children was only 1.4 per cent.

The conclusion is drawn that tuberculosis is much more common among Indians than in the white race, depending on the locality, and that the situation is so serious as to require the prosecution of vigorous measures for its relief.

As among the whites, the prevalence of small-pox in the Indian population seems to bear a close relation to the thoroughness of vaccination. Only six actual cases of small-pox were found among the 39,231 Indians examined. Superintendents and reservation physicians should be held to strict account for the thoroughness of vaccination in their respective districts.

Strangely enough, typhoid fever is surprisingly rare among the Indians. No cases were found in the survey. In part at least this rarity is explained by the facts that the disease has not yet been extensively introduced among the Indians, that the water-supply is comparatively safe, and that the Indian is not a milk drinker. Closer contact with whites, however, will determine a greater prevalence of typhoid.

Scarlatina and diphtheria are uncommon with the Indians, while measles is frequent and is apt to be attended with a considerable mortality. Whooping-cough, chicken-pox and mumps are common. Among the reservation Indians venereal disease is rather infrequent, syphilis being less common than gonorrhea; but neither disease is found extensively.

In general, sanitary conditions on reservations are unsatisfactory. Small, overcrowded, ill-ventilated and dirty houses are the rule. Personal and social habits favor the spread of disease. In most schools trachomatous pupils mingle freely with the others, and washing and toilet facilities were often inadequate and obsolete. Imperfect screening against flies was noted, and medical and sanitary supervision were not satisfactory.

The Indian is being brought into constantly closer relations with whites by the opening to settlement of Indian lands, by improved transportation facilities, and by the gradual process of assimilation with the general population. These facts make the control of communicable disease among Indians, and the prevention of their spread to neighboring races, an important public health problem. The great point is not so much the treatment of individual diseases and patients—work which is in large measure nullified by the ignorance and indifference of the Indian—but the improvement of sanitary conditions which are responsible for these diseases. The collection of vital statistics was found to be very imperfect on most reservations, and often they were not preserved and compiled with proper care.

Indian boarding-schools have without doubt been an important factor in the spread of trachoma, as also the presence of flies in the spread of trachoma and tuberculosis. The insanitary condition of most Indian schools is laid to the presence of one or more of the following factors: overcrowding, inadequate equipment, imperfect sanitary supervision and lack of observance of necessary sanitary precautions. The conclusion is stated in the report that the medical branch of the Office of Indian Affairs is hindered from doing effective work by (*a*) insufficient authority in medical and sanitary affairs; (*b*) existing obstacles such as racial characteristics, present economic status of the Indian and varying physical conditions on the reservations, and (*c*) inadequate pay, absence of reasonable expectation of promotion, and lack of *esprit de corps* and coordinated organization (see Organization of Physicians in the Indian Service, news department, The Journal, Feb. 8, 1913, p. 458; Physicians in the Indian Service, current comment, ibid., p. 454).

The recommendations embodied in the report to the Senate are general, and indicate broad principles of action capable of modification to meet diverse local requirements. The improvement of sanitary conditions among the Indians should be effected by (1) improving the economic status of the Indian, as fast as possible making him self-supporting and a property owner; (2) education in personal and domestic hygiene, and the prevention of contagious and infectious disease; (3) improvement of housing conditions, including the preparation of designs for the cheapest and most sanitary dwellings for the various climatic conditions of the various reservations, and the requirement that all dwellings built in the future should conform to approved designs; (4) so far as practicable restriction of one family to one house; (5) provision of sanitary privies for permanent houses and camps; (6) division of reservations into sanitary districts according to size and density of population, each district to be under the control of a medical officer who should be held to strict account for the sanitary condition of his district; (7) an accurate census of each sanitary district, including the sanitary condition of all dwellings and the physical condition of all persons; (8) regular sanitary inspections of all districts, dwellings, boarding-schools and day schools for the discovery and abatement of nuisances; (9) giving medical officers full authority as sanitary officers; (10) placing medical officers under the control of a distinctly medical bureau; (11) the permanent recording of vital statistics, and (12) practically a reorganization of the Indian Medical Service with increased pay in order to increase efficiency.

Special hospitals and clinics for tuberculosis and trachoma should be instituted, and victims of these diseases should be in separate schools and away from chances to extend the infection. An excellent suggestion is that steps be taken at once to put in thoroughly good sanitary condition some one reservation now having a high incidence of disease. This would serve as a demonstration of the practicability and benefits of sanitation.

This survey is most timely, and its conclusions merit sober consideration. It has been pointed out in The Journal that the Indian race in America is increasing (Health of the American Indian, editorial, The Journal, March 15, 1913, p. 832). The misinformation in the past regarding actual disease among them is well exemplified in the erroneous idea of the wide prevalence of venereal disease. Now with a positive basis of knowledge as to actual conditions obtaining, it is possible effectively to meet the situation. The recommendations embodied in the report from the Public Health Service are based on definite facts and should be carried into effect without delay.

U. S. Senate Asked to Investigate von Ruck Remedies and Methods

The following is taken from the *Congressional Record* of May 26, 1913:

TREATMENT OF TUBERCULOSIS IN NORTH CAROLINA

Mr. Overman: I submit a resolution, which I ask may be read, and I ask unanimous consent for its present consideration.

The resolution (S. Res. 89) was read, as follows:

> *Resolved*, That the Secretary of the Treasury be, and is hereby, requested to institute, through the Bureau of the Public Health, an investigation of the practices and methods employed by Drs. Karl and Sylvio von Ruck, of Asheville, N. C., in treating tuberculosis and in rendering persons immune from tuberculosis, and to report to the Senate as soon as practicable whether the vaccine used by the said Drs. von Ruck in attempting to render persons in health immune to tuberculosis is successful in immunizing those thus vaccinated.

Mr. Gallinger: Mr. President, I do not rise to object, because we want all the light we can get on this important subject; but it occurs to me that this tuberculosis-vaccine controversy seems to be running riot. We have Dr. Friedmann making claims for a remedy that has been shown to be practically worthless, and we have now a physician in Chicago, Dr. Duket, who assures the country that he has a serum that is a certain cure for tuberculosis. I have very grave doubts myself as to the efficacy of any of these serums; but the Senator from North Carolina thinks that the resolution ought to pass and I will not object, although I doubt the propriety of the government officially engaging in such investigations.

Mr. Overman: Mr. President, I wish to suggest that with Dr. von Ruck this is no new matter. He has a hospital in western North Carolina, and numbers of patients have been cured by him. There is a Senator on this floor who could rise and testify that he has been cured by this treatment. If we can investigate a foreigner and his methods, I do not see why we should object to the examination of those of an American who, I think, has really the vaccine matter that will do the work.

Mr. Gallinger: As I heard the resolution, Mr. President, I understood it to mean that this is a serum that makes persons threatened with tuberculosis immune from the disease. Is that it?

Mr. Overman: Yes.

Mr. Gallinger: Is it also claimed to be a cure for the disease when it actually exists?

Mr. Overman: It has really cured many people, and our leader, the Senator from Indiana (Mr. Kern), I do not mind stating, says that he was cured by it and that he would be willing to give testimony to that effect.

Mr. Gallinger: We can readily get testimony that men have been cured of all sorts of diseases by all sorts of remedies, but that really proves very little.

Mr. Overman: There is no harm in adopting the resolution.

Mr. Gallinger: There is no harm in it, except that it establishes a bad precedent; but I will not object.

Mr. Overman: There is no harm in allowing the government to investigate the matter.

The Vice-President: The question is on agreeing to the resolution.

The resolution was agreed to.

Society Proceedings

COMING MEETINGS

American Medical Association, Minneapolis, June 17-20

American Academy of Medicine, Minneapolis, June 13-15.
Amer. Medico-Psychological Assn., Niagara Falls, Can., June 10-13.
American Proctologic Society, Minneapolis, June 16-17.
Conf. of State and Prov. Boards, St. Paul, June 13-14.
Maine Medical Association, Portland, July 2-3.
Massachusetts Medical Society, Boston, June 10-11.
New Jersey Medical Society, Spring Lake, June 10-12.
North Carolina State Medical Society, Morehead City, June 17.
Washington State Medical Association, Everett, July 14.

AMERICAN ORTHOPEDIC ASSOCIATION

Twenty-Seventh Annual Meeting held in Washington, D. C., May 6-8, 1913

Under the presidency of Dr. A. R. Shands, Washington, D. C.

The following officers were elected for the ensuing year: president, Dr. G. G. Davis, Philadelphia; vice-presidents, Dr. T. L. Starr, Toronto, and Dr. L. W. Ely, Denver; secretary, Ralph R. Fitch, Rochester, N. Y.; treasurer, Dr. John L. Porter, Chicago. The meeting next year is to be in Philadelphia.

SYMPOSIUM ON SCOLIOSIS

The Normal Positions of the Spine and Their Relation to Lateral Curvature

Dr. E. G. Abbott, Portland, Maine: The normal spine may be flexed in almost any position. In childhood, the vertebral column is very flexible. The adult spine has no such free motion, so that the changes from one direction to another are not so noticeable in it. It is easy to place the normal spine in any position or combination of positions. In the scoliotic spine, on the contrary, it is often necessary to use considerable force in order to accomplish this in certain directions. A normal spine may be held in a wrong position until typical changes of scoliosis take place and the deformity becomes fixed. The position, which at first is actively assumed through the muscular effort, soon becomes habitual; and habitual assumption of it seems to develop a typical scoliosis. In the latest experiments for proving the effect of muscular action on the spine not all methods of arriving at final conclusions have been exhausted, and the subject still demands further consideration before absolute statements should be made.

Prognosis in the Treatment of Lateral Curvature

Dr. John L. Porter, Chicago: There are some general facts which have a bearing on prognosis which should be considered: (1) the cause of the deformity; (2) age at onset; (3) age of the patient; (4) type of the deformity; (5) the patient, and (6) incidental benefit of treatment. We have all found our greatest success between the ages of 12 and 20, and in cases not due to congenital bone defects. We all know what a help it is to deal with an optimistic, alert, interested patient who is anxious to help. Low general health, disposition, etc., often improve with improvement of the scoliosis.

Correction of the Fixed Types of Lateral Curvature, Complicated by Visceral Derangements

Dr. Roland O. Meisenbach, Buffalo, N. Y.: It is a well-known fact that in most of the cases of lateral curvature there are necessarily secondary changes in other parts of the body. We should not attempt to build the patient up by medication and thereby lose time, but after the spine is corrected other measures may be undertaken with better results. Cardiac lesions, especially functional, due to pressure, may improve after correction, and are not increased. In cases of the severest type with greatest deformity of the spine and derangement of the viscera, treatment should be undertaken cautiously, with a view to improving the general condition of the patient.

The Rotation Treatment of Lateral Curvature

Dr. A. Mackenzie Forbes, Montreal: The rational treatment of scoliosis is to place the parts in a position as far removed from deformity as possible, and to retain them in this new position until they shall have become changed by Wolff's law. In the past our results in treating scoliosis have not been brilliant; this is because it is not a deformity of the spine alone, but also of the trunk and thorax. We have assumed that the spinal deformity was the cause of the other two, and our treatment has been directed wholly against this. The usual form of treatment was by side-bending, but I prefer rotation, because I can obtain as much correction as possible by rotation, and because the position of rotation is well borne. Rotation can be secured without any apparatus at all, but I use a more or less complicated apparatus and am constantly changing it. The accepted form of treatment is the production of physiologic scoliosis by rotation on the side opposite to the pathologic scoliosis.

DISCUSSION

Dr. Walter Truslow, Brooklyn: Dr. Abbott has presented a decided advance in the treatment in giving us the flexed position. I wish to emphasize the importance of a third plane of space in which this deformity lies, the anteroposterior plane. If we extend the patient forward, we overcome the body lean backward. If we get the right final method, it will be a two-stage process. We shall overcome these secondary conditions first, and then the main trouble, the rotation, afterward.

Dr. Z. B. Adams, Boston: The differences between Forbes' and Abbott's methods is that Dr. Abbott puts his patient in flexion; then he puts a circular strap around the thorax and pulls down. That increases the rotation.

Dr. A. H. Freiberg, Cincinnati: Cook takes the most convenient situation for the correction of his crook—about the middle of the dorsal region; there the deformity is most amenable to any mechanical control; but it is evident that his method would be inefficient for any other portion of the spine. His statement that if you correct the dorsal curve, the lumbar curve will take care of itself, is not well taken. On the contrary, I think that if we confine our efforts to the dorsal curve when there is a well-marked lumbar curve, it will increase the latter—simply from the action of gravity. We always find torsion and lateral deviation together, and the torsion element of the deformity is the more difficult to dispose of.

Dr. S. Kleinberg, New York: Out of fifty-two cases which I have treated by the Abbott method, seven have been overcorrected, twenty-two have been markedly improved, and twenty-one have not improved at all, while two have been made worse. It is impossible to say in advance at what point improvement is going to appear. We have to depend a great deal on the posture. The breathing has a great deal to do with the cure also. It seems impossible to influence the high cervicodorsal deformity, and even with severe lumbar curves I have had but little success.

Dr. Michael Hoke, Atlanta, Ga.: Some methods named after the men who devised them seem to fail to give satisfaction in the hands of others. This is because one cannot apply these methods universally to a given number of cases, without carefully differentiating between the details of the given cases. In many instances in which failures occur, it is the fault of the operator and not of the method. It is good to advocate the rotation, the breathing, the fixation and the lateral pressure treatments in scoliosis. Different forces have to be applied to different parts. The method should not be attacked, but the good in each method should be utilized; and when there is failure we should criticize our way of applying the method.

Dr. John Dane, Boston: Dr. Meisenbach has done a wise thing in drawing our attention away from the side of the spinal deformity and toward the side of the deformity of the trunk and thorax in scoliosis. I believe that it is impossible to have any irritation around the dorsal branch without having a reflex sent to the anterior branch. Bronchial, stomach, intestinal and all sorts of functional troubles come from scoliosis.

Dr. G. G. Davis, Philadelphia: Three different methods for obtaining correction in lateral curvature have already been published: the Abbott frame, the Forbes frame and the Adams. Dr. Elmer, in my clinic, is trying to accomplish the same object with the patient in a sitting position, using two uprights with a seat to which the patient is strapped.

Dr. S. M. Cone, Baltimore: I had a case of scoliosis produced by chronic appendicitis, with a fecal impaction of the colon, which disappeared entirely with the removal of the cause.

Dr. Compton Reilly, Baltimore: The starting-point of scoliosis is in the pelvis. I think it starts with a twist. I have been using the same apparatus to correct this deformity that I use for the spine in Pott's disease. The time is coming when we shall use no apparatus for the application of the jackets in lateral curvature, but shall simply prop up the foot, which is apparently short, have the patient bend forward, and apply the jacket in that position without any forcible apparatus.

Dr. David Silver, Pittsburgh, Pa.: A great deal of improvement has come from the Abbott method. In stiff cases I have been having the patient remove the jacket morning and evening and take exercises. It has proved a good thing. In cases of paralytic curvature we must concomitantly use the exercises and movements to increase spinal flexibility.

Dr. S. Kleinberg, New York: There is a question as to whether or not the lumbar curve is associated with any pelvic deformation. In a series of twelve cases there were three or four in which there was a difference between the measurements on the two sides from the posterior superior to the anterior superior spine of the ilium.

Dr. S. J. Hunklin, San Francisco: In cases of great rigidity I find that by having the assistant stand on a platform two feet above the floor, his back against the wall, he is able to produce side bending and flexion until the deformity disappears. Then the jacket is put on. No force is applied to the patient, and rotation is easy.

Dr. H. Augustus Wilson, Philadelphia: We are at present without a standard by which to judge our results. We cannot rely on roentgenography as a means of recording conditions before and after treatment. The patients will judge our results by their personal feelings, and the parents by their children's capabilities. We should try to know accurately the conditions before, during and after treatment, the real changes that take place—not in function or in appearance, but in measurement.

Dr. E. G. Abbott, Portland, Maine: It makes no difference what kind of apparatus a man uses so long as he can place his patient in the proper position by means of it. The position desired is that of flexion and lateral bending, with elevation of one shoulder and depression of the other. If you have a lumbar curve it is necessary to put on an additional strap to make traction and rotation there. When the curve is in the lumbar spine you must be careful in correcting it, that you do not develop a curve in the dorsal region—which should be held by a strap and prevented from bending or becoming crooked.

Dr. John Ridlon, Chicago: My advice is treat the cases as they seem to demand. It is absurd to undertake to treat them all one way.

Dr. B. E. McKenzie, Toronto: In treating these cases one should bear in mind the fact that he is dealing with an individual, and not simply with a deformity. In treating postural deformities I should exclude mechanical means, such as brace, jacket, etc. We are using the Abbott jacket, and I am satisfied that in difficult structural cases it is of great benefit.

Dr. James K. Young, Philadelphia: We are using the Abbott method and are much pleased with the results obtained from it, but the cases must be selected carefully. The age of the patient is important. A patient of 22 does much better than one of 14.

Dr. D. D. Ashley, New York: I believe that there is a great deal in the technic for every one of us to learn. I have secured better results with my growing patients. I have found girls of 16 or 18, very small and thin-ribbed, whom it has been impossible for me to correct. Their ribs are elastic and will bend into apparent correction, but when we put the Roentgen ray on such patients we find but little modification of our scoliosis.

Dr. H. P. Galloway, Manitoba: We have all encountered those difficult cases in children whose deformity is due to poliomyelitis, and watched them grow worse, year after year, and felt the difficulty of controlling them. I have thought of trying the experiment of bone-grafts in producing a fixation of the spine in such cases. I do not think we should be doing a great deal of harm by fixing or solidifying the vertebrae in the corrected position. I hope that some one will try that method of treatment.

Dr. Robert Soutter, Boston: Dr. Sever's work, at the Children's Hospital at Boston, with these difficult structural cases has been wonderfully successful. He used a method of traction on the head and corrective gymnastics. In using the Abbott method I often find that in putting on a second or third jacket I obtain a correction that I could not obtain in the first or second.

Dr. Joseph E. Root, Hartford, Conn.: If you will give a proportionate amount of time to the older and stiffer cases, I think that you will obtain the same results. I put all my patients in the hospital now. They can be examined every day. I have those in whom the curves are hard put in the Abbott frame every day and stretched. The breathing method is also helpful. Change the jacket every week, if necessary, and put the patients through exercises with the jacket on and off. By constant attention in the hospital, I have accomplished in one month what I have worked for two or three years to get. Such treatment means hard work, but fine results. Do not apply the jacket and then not see the patient for a week or two. The improvement is not the result of any particular method, nor is any particular method at fault when there is poor result.

Dr. J. E. Sever, Boston: I have had more experience in treating lateral curvature with the head suspension, although I think that the flexion is mechanically better. The simpler the apparatus the easier it is to put on and the better the result.

(To be continued)

AMERICAN NEUROLOGICAL ASSOCIATION

Thirty-Ninth Annual Meeting, held at Washington, D. C.
May 5-7, 1913

The President, Dr. Pearce Bailey, New York, *in the Chair*

Present Status of Neosalvarsan in Parasyphilis of Nervous System

Dr. Edward D. Fisher, New York: Since the finding of the spirochetes in the brain and cerebrospinal fluid in general paresis and tabes, the term "parasyphilis" must be discontinued. All diseases of the nervous system due to syphilis are due to the same active agent which is the cause of the pathologic changes both in cerebrospinal syphilis and in the more chronic manifestations formerly classed under the head of parasyphilis. The discovery of the spirochetes gives us a rational basis for the use of neosalvarsan. The question arises: What is the relative efficiency of this remedy in the later manifestations of syphilis of the nervous system, that is, in tabes and general paresis? In my experience the hopes raised by Ehrlich's discovery have not been fully realized and cannot be. We have only to consider the pathologic changes in these diseases to understand the reason. With the Wassermann test, however, we have a rational plan of treatment in the use of neosalvarsan and mercury and the iodids. As we find the Wassermann test negative we can stop our medication and resume it as it becomes again positive. It is certainly rational to remove the active agent of disease, as we can by the use of neosalvarsan, and thus prevent extension of disease. In the light of our present knowledge, we are in a position to make an early diagnosis, and the importance of beginning treatment early is emphasized. The importance of being conservative in our claims for this most valuable remedy should be emphasized as it must be many years before we can know whether its early employment, that is, at the time of the initial lesion, prevents the later manifestations of syphilis of the nervous system.

DISCUSSION

Dr. Joseph Collins, New York: I am in accord with Dr. Fisher in regard to the necessity of dispensing with the terms "parasyphilis" and "metasyphilis." I am not sure that we all recognize that tabes, general paresis and meningeal syphilis are syphilis, not nervous diseases.

Dr. Philip Coombs Knapp, Boston: The clinical and pathologic distinctions thus far justify the division into ordinary syphilis and parasyphilis; this is a convenient division which I think might still be held. My experience with neosalvarsan and salvarsan has been that there is a good deal still in Ehrlich's original contention that the results are not so likely to be beneficial in syphilis of the nervous system as in the early stages of syphilis manifesting itself in other organs of the body. My experience with neosalvarsan and salvarsan in syphilis of the nervous system has not, on the whole, led me to believe that we have obtained much better results than we did with the use of mercury and iodin. In the last two months I have been trying the intraneural method, and thus far the benefits seem to be uncertain and possibly not of sufficient value to warrant the increase of danger that accompanies the use of that method.

Case of Juvenile Tabes

Dr. C. Eugene Riggs, St. Paul, Minn.: A boy aged 7½, with no luetic history in either parent and no symptoms of hereditary syphilis, began to have gastric crises when 10 months old; they now occur every three months. There are marked ataxic gait and muscular weakness, but knee- and Achilles-jerks are absent. The Wassermann is positive in blood-serum and spinal fluid; there is no lymphocytosis and no globulin excess.

DISCUSSION

Dr. Philip Coombs Knapp, Boston: Cases of juvenile tabes are very rare. I have a case now which, although not confirmed by necropsy, seems to me probably a case of juvenile tabes, in a girl of 16 of whose family history nothing can be learned. At the age of 5 her head was injured. She sustained several scalp wounds and was unconscious for a day. After that there was no trouble at all until the age of 11, when her sight began to fail. At 12 she had lost vision completely. Some one examining the eyes found optic atrophy of so-called traumatic origin. There had been a history for one or two years of typical tabetic pains, sharp, shooting pains of brief duration. On examination some perception of light and well-marked primary atrophy of both disks were found, but no indications of any keratitis and no radiating scars about the lips. The two central upper incisors were peculiar in that they were somewhat broad, but not characteristic of Hutchinson's teeth. The knee-jerks were absent on one side, and obtained only by reinforcement on the other. There is a marked Wassermann reaction in the blood and the cerebrospinal fluid, and a globulin reaction, but no increased lymphocytosis.

Dr. H. M. Thomas, Baltimore: A boy of 7 was sent to Johns Hopkins Hospital with the diagnosis of tumor, probably of the cerebellum. The child had been extremely bright up to the fifth year, when he had begun to deteriorate and then it was thought that he had an injury. His deterioration took the form of being unable to speak so well as he had before; he had been loquacious; he became noisy and fretful and hard to manage, and his walk became so unsteady that he could hardly get about. On examination, he showed no sign of hereditary syphilis. He had no choked disk; his walk was distinctly cerebellar; his pupils were distinctly unequal and did not react to light, and his reflexes were exaggerated. The boy's blood gave the positive Wassermann reaction and the diagnosis of cerebral syphilis was made. He was given two doses of neosalvarsan and changed markedly. He became quieter; his walk became steadier, and he left the hospital having done pretty well. On arriving home, however, he became extremely quiet, and in a week he was brought back in a different condition. At that time he was speechless; his walk was perhaps a little less ataxic; still he made no attempt to walk. The physical signs were the same. We did a lumbar puncture. He had a cell-count of 33, positive globulin and positive Wassermann, and a Wassermann in his serum was also positive. The case then seemed to be one of juvenile general paresis, and, as it was the only case, we did not venture to make that diagnosis.

Two Cases of Removal of Extradural Tumor of the Spinal Cord

Dr. Philip Coombs Knapp, Boston: In 3,617 necropsies at the Boston City Hospital a tumor was found only four times, but the spinal cord was not always spared. In 1,294 patients in the neurologic service a tumor was diagnosticated ten times. In eleven cases operation has been performed, in six cases with fatal results, in four with some improvement so that the patient could get about on crutches, and in the fifth case with marked improvement followed by a return of symptoms and a second operation. Data on the operations done in Boston, fourteen of which have been reported, were collected, and showed the following results: tumor removed 8, 6 improved, 2 died; tumor partly removed 7, 3 improved, 4 died; tumor found, not removed 4, 2 improved, 2 died; lesion found, not tumor 6, 3 improved, 3 died; nothing found 6, 3 improved, 2 died, 1 result uncertain. Shersburg collected statistics of 119 operations, in which 49 patients were benefited and 42 died.

Peculiar and Undescribed Disease of the Nerves of the Cauda Equina

Drs. Foster Kennedy and **Charles A. Elsberg**, New York: During the last five years, in a large number of spinal operations, we have observed five cases alike in their histories, their clinical findings and in the peculiar swelling and discoloration of the roots of the cauda equina. We have been led to class them together in the belief that they form a definite clinical and pathologic entity. Pain was present in the back of the thighs and legs in all of the patients; atrophy of the anterior muscles with loss of the power of dorsal flexion of the foot was present in four; the objective sensory changes consisted of loss in the sacral and lowest lumbar nerves. The disorganization of the functions of the bladder and rectum was complete in four patients. The abdominal reflexes were regularly present, while the ankle-jerks were lost in four; the knee-jerks became lost coincident with the upward progress of the disease. The conditions found at operation were mainly a swelling and reddish-blue discoloration of many or all of the roots of the cauda equina. A thorough search of the literature failed to reveal any proved cases like those described. A few cases have been reported in which a clinical diagnosis of neuritis of the cauda equina was made and the condition believed to be syphilitic, but in none of these was the diagnosis verified by operation or autopsy. A similar disease has been described in the horse, and in this animal the post-mortem examination revealed a condition like that found in the patients operated on and reported. The Wassermann test both in the blood and in the cerebrospinal fluid was negative in all of the cases; therefore the condition is not luetic; nor were there any signs of a meningeal lesion.

(To be continued)

PEKING MEDICAL CONFERENCE

Meeting held in Peking, China, January, 1913

The Vice-President, Dr. O. T. Logan, in the Chair

Officers Elected

The new officers are: president, Dr. D. D. Main, Hangchow; vice-president, Dr. C. F. Johnson, Tsinanfu; secretary and treasurer, Dr. H. H. Morris, Shanghai.

The next meeting is to be held in Shanghai.

The China Medical Missionary Association

This is the only national medical organization in China. It has over 500 members, all foreigners, at work in every province. On this organization, to a large extent, depends the rapidity with which the ideas of western medical science will permeate China's 400 millions.

This association holds a convention every three years. The last one took place in January at Peking. The Chinese Government did all in its power to show an appreciation of the work done by the organization throughout China.

Address by President of Chinese Republic

President Yuan Shi K'ai gave a reception to the delegates and in the course of an address expressed thanks for the work done, especially in those regions where the importance of sanitation is not realized. He said that through the efforts of the association sanitary knowledge and methods were being widely spread; the poor and the destitute women and children were being cared for and given the elements of an education; the plague in Manchuria two years ago had been checked; in the war between the north and the south of China the wounded were cared for; for this work the president was glad to be able to express his thanks in person. He hoped that the work would be carried on with the same zeal as heretofore for the good of all and indirectly for the strengthening of the bonds of friendship between China and the countries represented by the foreign medical missionaries.

Medical Education

The keynote of the convention was medical education. The foreign doctor in China is but a temporary necessity. What happened in Japan will some day happen in China. The preponderance of foreign doctors will decrease each year, but medical schools must first be established. The association made plans along this line to hasten the time when the Chinese will be able to care adequately for their own sick without depending on foreign assistance.

The Chinese themselves realize that for many years the help of foreigners will be needed. The problem of medical education presents a twofold difficulty. As yet there is no complete and uniform medical nomenclature, and there are but few well-equipped medical schools. The Surgeon-General of the Army and a secretary of the Bureau of Education appeared before the convention. They expressed the desire of the government for coöperation in the adoption of a uniform nomenclature as well as in the training of medical students.

Fortunately there is at present the closest sympathy between foreign doctors and the Chinese. The convention passed the following resolutions:

> A most important feature of the work of medical missions in China at the present juncture is the work of training Christian young men and women that they may take their place as thoroughly qualified medical missionaries to perpetuate the work we have begun, and occupy positions of influence in the service of their country.
>
> The association therefore considers that the object of our presence here can now best be advanced by concentrating our energies largely on the important centers approved by the association, and forming there efficient union medical colleges and specially equipped hospitals. And we would strongly recommend that all such colleges be affiliated and coordinated with other existing missionary educational institutions.
>
> The association recommends that much of the work done in the less important stations should, wherever practicable, be placed under the charge of qualified Chinese; that missionaries of ability and experience in certain instances should be called in from these stations to the teaching centers to take part in the work of the colleges and large hospitals; and that the staffing and thorough equipment of these centers should take precedence of the opening up of new medical work throughout the country.
>
> Recent movements in China have developed a natural desire in the people to carry out their own educational reform, and this we must recognize, and make the foreign element in our work as little prominent as possible, by having our colleges gradually and increasingly staffed and supported by the Chinese themselves.
>
> The association considers that the minimum staff for efficient work in a medical college should be ten men on the field giving full time. This means, when furloughs, language study, etc., are taken into account, a total staff of at least fifteen fully qualified teachers, foreign or Chinese.
>
> The association recommends that sufficient lecture and laboratory accommodation should be provided, and as liberal an equipment as possible in microscopes, models, pathologic specimens, etc.; also that clinical opportunities to the extent of three beds to each student in the final two years be considered the minimum.
>
> The association strongly recommends that until union medical colleges mentioned below are efficiently staffed and equipped, no new medical colleges be started in China. The schools referred to beginning with the north, are Mukden, Peking, Chinanfu, Chengtu, Hankow, Nanking, Hangchow, Foochow and Canton.
>
> As medical books in Chinese are necessary in order to carry on the instruction in our colleges and to provide medical literature for graduates, the association would urge on the missionary societies the need for arranging that suitable men should devote a large part of their time to the work of translating and preparing such books, and also the necessity for money grants for this purpose.
>
> We have no desire to create permanently foreign institutions, and we aim and hope that these medical colleges will gradually and ultimately be staffed, financed and controlled by the Chinese themselves.
>
> We are desirous of bringing our teaching work into line with the regulations of the Ministry of Education, and in all ways to cooperate with and assist the government of the republic in medical education so that a strong and thoroughly equipped medical profession may be established in this great land.

In the absence of the president, Dr. Philip B. Cousland, who was detained in Scotland by ill health, the vice-president, Dr. O. T. Logan of Chengteh, Hunan, presided at the various sessions of the convention.

Papers on the following were read by delegates and invited guests: "Climatic Bubo," "Vesical Calculus," "The Behavior of the Organisms in Relapsing Fever," "Notes on the Life-Cycle of Clonorchis," "Gunshot Wounds," "Asiatic Cholera," "An Experimental Study of Racial Immunity," "Sanitary Organization of China," "A Sanitary Propaganda for China," "Medical Inspection of Schools" and "The Need for Physical Training and the Establishment of Physiologic Standards in Schools."

AMERICAN SOCIETY OF TROPICAL MEDICINE

Tenth Annual Meeting Held at Washington, May 6-8, 1913

The President, Dr. Edward R. Stitt, U. S. Navy, in the Chair

Officers Elected

The following officers were elected for the ensuing year: president, Dr. Richard P. Strong, Boston; vice-presidents, Dr. Creighton Wellman, New Orleans, Dr. Charles F. Craig, Washington, D. C.; secretary, Dr. John M. Swan, Rochester, N. Y.; assistant secretary, Dr. Allen J. Smith, Philadelphia; treasurer, Dr. Joseph D. Weis, New Orleans.

Boston was selected as the place for holding the next annual meeting.

The Value of a Course in Tropical Medicine for the Training of the Internist

Dr. Edward R. Stitt, Washington, D. C.: In the study of tropical medicine there is considerable advantage in having a school located in a temperate climate in order to warrant the necessary amount of work for mastering the subject. Marked advances have been made in the study of the diseases of the tropics by men who were not residents of tropical countries. The work of Robert Koch on the spirillum of cholera, on malaria in various parts of the world, on plague, on amebas, on the spirochete of African tick fever, and on sleeping-sickness is an example of the possibilities for original work open to men residing in temperate climates. If Koch could accomplish such signal service in the interest of tropical medicine, why cannot every internist find something of interest in the diseases of the tropics? There are great possibilities for the internist at home to check the development of infections which are brought to this country by returning soldiers, sailors, business men, missionaries and others. Rare cases of disease fail to be diagnosticated becauthe physicians at home are not familiar with the possibilities of tropical pathology. In the tropics diagnosis is made almost exclusively in the laboratory. In temperate climates the diagnosis is made partly by bedside study and partly by laboratory work. In an individual who has returned from the tropics, amebiasis, filariasis and syphilis may be present and the patient may be about attending to his ordinary business. It is the duty of the internist who sees such a patient to decide which infection is of greatest importance in the causation of the symptoms of which he complains. It is often difficult to determine the infection which is causing the most trouble and to exclude those that are of less importance. It must be remembered that pneumonia, kidney disease and heart disease are as common in the tropics as they are in the temperate climates. It is possible to give outside of the tropics that instruction which best correlates laboratory work and ward work.

Certain Features of the Physiologic Activity of White Men in the Philippine Islands

Dr. Weston P. Chamberlain, New York: Three thousand temperature observations were made in order to determine the effect of continued high atmospheric temperature on the physiologic activity of healthy white men. The average of these temperatures was 98.7 F. Sometimes an elevation of one or more degrees was found without apparent cause. The average body temperature of white men at Vancouver was 98.7 F. before drill and 98.8 F. after drill. Blonde men showed no difference in body temperature from that of brunettes. There is no apparent effect of season on the pulse- or respiration-rate and there seems to be no difference in the pulse- and respiration-rate after a year's residence in the tropics. The complexion seems to have no influence on these rates. The average pulse-rate in the men observed was 77.3 per minute. The average respiration-rate was 19.3 per minute.

On the systolic blood-pressure 5,368 observations were made. A 5-inch cuff was used. The average age of the individuals tested was 26.6 years; the average systolic pressure was 115.6 mm. On the weight, 3,040 observations were made. The first observation was made after the person had resided seven months in the tropics, and the second observation was made a year later. The amount of weight lost averaged 3 pounds, or 1.7 per cent. of the original weight. The complexion type of the person seemed to have no influence on the weight. The large men appeared to show no greater change in weight than the small men.

Blood-counts were made in 1,418 men. The red cells averaged 5,200,000 after nineteen months' residence. The hemoglobin averaged 89.6 per cent. The color index was between 0.86 and 0.87. In seventy-two soldiers the leukocytes averaged 7,304. There was an increase in the lymphocytes, 31.7 per cent. small lymphocytes, 6.9 per cent. large lymphocytes. The polymorphonuclear cells averaged 56.8 per cent. In the Arneth count there was a slight deviation to the left. The so-called tropical anemia is due to infection and not to the influence of climate. The pale color of the white men residing in the tropics is due to a cutaneous ischemia.

Urine examinations were made in 576 men, at the beginning of tropical residence and at the end of one year. In five albumin was found at the beginning of tropical residence and in six at the end of one year's residence. Casts were found in the urine of ten men at the beginning of tropical residence and in thirteen at the end of the year's residence. The specific gravity averaged 1.01[illegible] at the beginning of tropical residence and 1.0197 at the end of one year's residence. Tropical renal insufficiency does not exist.

After moderate exercise there is a slight acceleration of the pulse-rate and a slight increase of systolic blood-pressure, a slight increase of respiration-rate and a slight increase of temperature, as would be expected. Exercise is as beneficial in the tropics as elsewhere. A great amount of sickness is found among the women who do not go out in the daytime. The influence of tropical residence on the nervous system under the improved conditions existing in the Philippine Islands seems to be no different from the influence of residence in the United States. The diet in the tropics is to be regulated by the patient's appetite. Men who had lived five and a half years in the Philippine Islands seem to show no difference in weight from those who had lived there nineteen months. The injurious effect of residence in the tropics commonly supposed to be due to light is probably due to excessive heat and humidity. Malaria, intestinal parasites, venereal diseases and alcohol are the causes of bad health from tropical residence.

DISCUSSION

Dr. Malcolm Watson, Klang, Federated Malay States: As a result of thirteen years' residence in the Federated Malay States, it is my opinion that if certain infectious diseases can be excluded, the white men keep in excellent health. The real difficulty lies in avoiding infectious disease. There is more difficulty with children than with adults. Children cannot be kept away from the natives, and the standard of native thought is so different from our standard that it is almost impossible to rear children in the tropics. The association with the natives in addition to its moral aspect gives greater likelihood for the contraction of infection.

Dr. Charles F. Craig, Washington, D. C.: In the Canal Zone it is a rule that every white man shall take a vacation once a year and go north. It has been found that the men lose energy after they have stayed for a long time in the Zone.

Dr. Creighton Wellman, New Orleans: The question of staleness, nostalgia and moral and social problems will be at a minimum when the facilities for amusement now to be found in the temperate climates are accessible in the tropics. Granting the control of infectious diseases, the world is open to colonization by the white man.

Dr. Elmer F. Otis, Peñuelas, Porto Rico: There are certain special infectious diseases that are more fatal to the white man in Porto Rico than to the native. Sprue is one of these infections.

Dr. Henry J. Nichols, Washington, D. C.: In any discussion of this question, the white woman and the white child must be considered. I accept the data that Dr. Chamberlain gives for troops, but I would not be willing to see the conclusions transferred to women and children. In the Philippine Islands the women are actually damaged by the climate. I have seen women who were interested in the life, who had had no infectious disease, and who wanted to stay; but who were unable to do so on account of the influence of climatic conditions on them. Many of them had menstrual disturbances. As woman is the foundation of the home, I can entertain no great hope of the colonization of the tropics by the white race.

Dr. Henry R. Carter, Baltimore: The white man who does not drink, who contracts no infectious disease and who takes sufficient exercise, will do well in the tropics. Babies, as a rule, do better in Panama than in the United States; but from the age of 3 or 4 years to 14 or 15 years children do not have enough exercise. They become too fat, have a pasty complexion and do not do well. It is a question in my mind whether under ordinary living conditions, white people will keep well in the tropics.

Dr. C. S. Ludlow, Washington: American women in the Philippine Islands commonly lose interest in the things that they are interested in at home. They do not take sufficient exercise to keep them well.

Taenia Saginata with V-Shaped Proglottides

Dr. George Dock, St. Louis: The patient was a negro woman who was treated for tapeworm in the dispensary. The greater part of the worm was removed, but the head was not obtained. Two other attempts were made to get the head, but both failed. In the three attempts 280 cm. of worm were obtained, consisting of 700 proglottides. These varied in width from 2 to 22 mm. Forty-five of the proglottides were asymmetric. The asymmetry resembled what would be obtained by putting two worms together at an angle. Each proglottis contained one genital pore usually situated on the stem of the Y or at the apex of the V. Twenty-one cases have been reported in the literature. In a few cases the heads have been found; but in the majority of cases the heads have not been found. In cases in which the heads have been found, there have been six suckers. These worms are usually considered to be double monsters in which two suckers have fused. Histologic examination seems to throw no light on the details of the monstrosity.

Case of Trypanosomiasis

Dr. J. A. Chatard and Dr. C. G. Guthrie, *Baltimore*: The patient was a man, aged 37, a native of Belgium. At the age of 22 he went to the Congo where he served twelve years. While there he had two severe attacks of amebiasis, one severe attack of blackwater fever and malaria constantly. On one occasion after a battle between eight Europeans and several hundred natives in which the mortality of the natives was high, so that their bodies remained unburied for several days, he had an obscure exanthematous disease, which many of the natives also had. This attack was characterized by high fever for four days, followed by a period of apyrexia; this was followed by the appearance of a papular eruption on an erythematous base, which was accompanied by a high fever and delirium. As he had been vaccinated he did not think it was small-pox. For eleven years he was located in the forest where sleeping-sickness was unknown, but later he was located in a sleeping-sickness country. There he had a febrile attack, which was followed by cervical lymphadenitis, depression, dizziness, lassitude, fever without chills, and increased appetite.

Aspiration of one of the cervical lymph-nodes revealed living trypanosomes. He was treated with atoxyl intramuscularly and tartar emetic intravenously. In nine weeks his symptoms disappeared. He was sent home to Antwerp and during the voyage the treatment was continued. When he reached Brussels the trypanosomes were absent. Although he was told that he must continue the treatment indefinitely he discontinued it at the end of the month because he had no symptoms. He came to the United States in 1909. In 1910 he had an attack of fever which was cured by quinin. In July, 1912, he became drowsy and his cervical lymph-nodes again enlarged and his other symptoms returned. He was very emotional and had some ataxia. The spleen was enlarged and hard and there was general enlargement of the superficial lymph-nodes. His blood showed a secondary anemia; there was a leukocyte count of 1,400; polymorphonuclear neutrophils, 40 per cent.; small mononuclears 54 per cent. Examination of the fresh blood was negative for parasites. Concentration methods were negative for trypanosomes. Aspiration of one of the enlarged cervical lymph-nodes showed no motile trypanosomes. Then one of the enlarged cervical lymph-nodes was removed and implanted into six rats. All six rats developed trypanosomes. Inoculation of rats with the patient's blood and the sediment of the cerebrospinal fluid failed to produce trypanosomes in the inoculated animals. After the intravenous injection of salvarsan the symptoms disappeared. The patient had a relapse two months later. He has been lost sight of.

DISCUSSION

Dr. John M. Swan, *Rochester, N. Y.*: It seems likely that the beginning of the infection in this patient may be detected in the attack of fever followed by the papular eruption which occurred just after the battle between the Europeans and the natives. This exanthem would correspond pretty closely to the eruption described as being one of the early manifestations of trypanosomiasis.

Dr. Edward R. Stitt, *Washington*: It is well known that perfectly well people can have trypanosomes in their peripheral blood without showing evidences of infection.

The Species of Anophelines Concerned in the Transmission of Human Malaria

Dr. Frederick Knab, *Washington, D. C.*: The habits of all anophelines are not alike. The study of malaria will be advanced by the study of the habits of these mosquitoes, and such a study ought to help to solve the remaining problems in the natural history of malaria. There are thirty-four species of Anopheles mosquitoes in the United States, of which eight are known to transmit malaria. Other species may be proved in the future to be potential hosts of the malarial parasites. The appetite for blood varies very much in the different species of anophelines and efficient hosts may be found among those mosquitoes having such an appetite. The association of certain species with men, the longevity of the species, and the topographic conditions of the country are also factors in the solving of the malarial problems. No phase of the life-cycle of the mosquito should be neglected in the study of the disease; it is just as important to study the larva and the pupa as it is to study the imago.

DISCUSSION

Dr. Creighton Wellman, *New Orleans*: A study of the lists of mosquitoes which have been published as being indigenous to New Orleans makes one suspect that a great deal of careless determination of species has occurred. The careful determination of species and the locality in which they occur cannot be too particularly insisted on.

Dr. Malcolm Watson, *Klang, Federated Malay States*: It is quite important to determine the species of Anopheles mosquitoes found in certain localities. It is useless to say that because Anopheles mosquitoes are present, therefore malaria must also be present. In the Federated Malay States the determination of species is absolutely essential if antimalarial measures are to be successful and economical. We cannot say from experience in one country what sanitary measures will be required in another.

Dr. C. S. Ludlow, *Washington, D. C.*: *Myzomyia ludlowi* is not thought to breed in fresh water, but the specimens from which the species was originally named were taken from fresh water. There is a species of malaria-carrying mosquito in the Philippine Islands which breeds in soap-suds water.

Dr. H. R. Carter, *Baltimore*: The determination of anophelines is frequently of importance in telling the sanitarian what he need not do. For instance, *Anopheles malefactor*, which breeds in collections of water, in hollow stumps on the Isthmus of Panama, is not a malaria carrier, and this knowledge is estimated to have saved the Canal Commission from $150,000 to $200,000 in its malarial work.

Dr. Edward R. Stitt, *Washington, D. C.*: At Canacao no malaria-carrying mosquito other than *Myzomyia ludlowi* is found. The highest salt content of the water at that place was 400 parts per million.

Dr. Elmer F. Otis, *Peñuelas, Porto Rico*: Malaria is restricted to the coast regions in Porto Rico, with one exception. In the hilly region in which malaria is present, the disease is brought from the coast by the natives who travel from the latter to the former.

Recent Observations on Malarial Plasmodia

Dr. C. C. Bass, *New Orleans*: The development of malarial parasites in cultures is exactly similar to their development in the blood of man. There is no discoverable difference between the first generation and the fourth generation of parasites grown in culture mediums. If the tubes in which the parasites are growing are shaken, the parasites will be killed. Addition of blood-serum and polymorphonuclear leukocytes to the culture-medium will kill the parasites. When the parasites are liberated from the red blood-corpuscles most of them die and a great deal of débris is left behind. It is probable that not more than two parasites can develop in one red cell. If the red cell is infected with more than two parasites, when the organisms have reached a certain size they cause the red blood-corpuscles to rupture and they are destroyed. The benign tertian parasite is irregular in outline and is elastic, so that a red corpuscle containing such an organism can pass through the smallest capillaries. The estivo-autumnal parasite, on the other hand, is not elastic and will not pass through the smallest capillaries. Consequently, when a red blood-corpuscle containing such parasites reaches the smallest capillaries it is stopped in its journey by the narrowing produced in the lumen of the capillary by the projection of the nuclei of the endothelial cells. Fifty per cent. of the deaths from malaria are due to cerebral plugging. After the capillaries have been plugged quinin will not reach the parasites; but if the capillaries can be dilated with nitrites then the quinin in the blood-stream may reach the parasites and kill them. The facts concerning cerebral plugging with malarial parasites have been determined by the injection of pure cultures of parasites through the carotid arteries of small animals, which, after a varying time, have been killed and their brains sectioned.

Beriberi

Dr. Weston P. Chamberlain, Plattsburg Barracks, N. Y.: Beriberi and polyneuritis gallinarum are identical diseases. There is no doubt of the correctness of the theory of the production of beriberi by rice, at least in the Orient.

Researches on the Etiology of Beriberi

Dr. Creighton Wellman, New Orleans: In feeding rice to fowls, if the pericarp is removed, the fowls develop polyneuritis. Legislation has been enacted in various countries and in California establishing a rice standard which classifies rice as beriberi-producing rice and non-beriberi-producing rice. In the United States this legislation prohibits the sale of rice when coated with glucose and talc, so-called polished rice. Polyneuritis gallinarum has been produced experimentally with milled rice, both cooked and uncooked; corn grits, containing 8.5 per cent. proteid; white wheat flour; a mixed diet containing oxalic acid; cane-sugar; puffed rice; cream of wheat, containing 11.75 per cent. of protein; sago; white potato; sweet potato; macaroni, and corn-starch. Fowls have been fed with many times the amount of glucose and talc which could be taken by the animals when on a diet of polished rice, without producing polyneuritis, provided the animal received at the same time a mixed diet. Fowls and pigeons, which are equally good for experimental purposes, have been fed on a mixed diet with the addition of 2 gm. of glucose and 1 gm. of talc a day for fifty-three days without producing the disease. When polyneuritis is produced, it appears on an average in about sixteen days, and is not cured by protein.

DISCUSSION

Dr. Charles F. Craig, Washington, D. C.: In countries in which rice is the staple article of diet, laws should be passed prohibiting the sale of milled rice. In the United States, on the other hand, such legislation is absurd. If laws are passed in this country against milled rice it will subject us to much ridicule.

Dr. William S. Krauss, Memphis, Tenn.: In Memphis, during one of the Mississippi river floods, two boys were marooned on a levee for several days and had nothing to eat but beans. Both of these boys had paralysis of both legs as a result of this diet.

An Epidemiologic Study of Pellagra

Dr. J. F. Siler and Dr. P. E. Garrison, New York: Spartanburg County, South Carolina, was selected on account of railway conveniences and because an excellent county map was in existence. From June 1 to Oct. 15, 1912, 282 cases of pellagra were reported. The morbidity in 1912 was between 35 and 45 per ten thousand population. In the ten townships of the county the existence of pellagra was greatest in Spartanburg and the surrounding townships. In every township pellagra is in excess in the cotton mill villages. In the city of Spartanburg the rate was slightly in excess of that in the mill villages. In the county of Spartanburg the cases among the white population exceeded those in the negro population in proportion of two to one. The morbidity of the disease among the whites was 45 per 10,000, and among the negroes 9.5 per 10,000. The density of the population alone does not offer an explanation for the incidence of the disease. The excess of the disease in the mill-village population is in the women and children who remain at home during the day. The incidence in the adult females is high. Pellagra appeared in Spartanburg in 1908 and increased progressively until 1911. There has been no recrudescence in the spring and in the fall. Climatic conditions influence the appearance of the symptoms. The majority of the cases occurred among the poorer families. In the families in which cases of pellagra occurred the absence of properly constructed privies, the absence of effective screening against flies, the limited use of fresh meat and the unhygienic preparations of food were noted. The importance of corn products seems to be less than was originally supposed.

Is the Importance of Intestinal Parasites in Tropical Pathology Exaggerated?

Dr. Edward R. Stitt, Washington, D. C.: Some writers take the ground that intestinal parasites are of no importance. On the other hand, the reduction in the death-rate in Bilibid Prison, from 75 per thousand to 9 per thousand after the quarantining of persons harboring intestinal parasites seems to indicate that there is some importance to be attached to their presence.

DISCUSSION

Dr. Creighton Wellman, New Orleans: Many men working in the tropics underestimate the importance of intestinal parasites, and some probably overestimate their importance. The idea that they amount to nothing is wrong. It would first seem necessary to define what is meant by the question, whether it applies to metazoan parasites alone or whether it includes protozoa as well as metazoa. Some years ago I investigated a disease which occurred among the fishermen of Western Africa. This disease was characterized by a severe anemia and was attended with a high mortality. It was found to be due to *Dibothriocephalus latus*. In one district in West Africa 13 per cent. of the population was incapacitated by uncinariasis. The activities of the Rockefeller Commission have been highly beneficial in relation to uncinariasis. In highly malarious countries the presence of intestinal parasites affects the mortality in two ways. The presence of hookworm infection increases the mortality from malaria; but, on the other hand, overzealous treatment of hookworm disease increases the mortality from malaria. Amebiasis is an important factor in the morbidity and mortality in the tropics. On the other hand, some parasites have been taken too seriously, such as *Strongylus subtilis, Hymenolepis nana* and *Trichuris trichiura*. It is possible that heavy infection with these parasites produce some anemia. In some districts in the tropics 100 per cent. of the children suffer from ascaris infection. This worm produces convulsions and even stimulates recrudescences of malaria. It is a difficult question to answer categorically; but I believe the importance of intestinal parasites is not exaggerated. Neglect of routine examination for intestinal parasites is reprehensible.

Dr. Henry J. Nichols, Washington: The importance of helminths is exaggerated. It is easy to discover an infection with intestinal worms; it requires no skill or special knowledge. These parasites have not the serious influence that other parasites have because they cannot reproduce themselves in the intestines. Intestinal worms are limited in their capacity for pathogenicity. As a general rule, it may be said that intestinal parasites are injurious in inverse proportion to their size and that intestinal worms are of the least importance. The helminthologists have justified the importance of these parasites, but their bearing on clinical medicine is not apparent. In the tropics a man is likely to suffer from infection with four or five parasites, and the relative importance of these infections must be decided by the clinician. He should be able to recognize the various worms and their possibilities for harm to the organisms. In some instances endeavors have been made to convince well persons who have been discovered to harbor intestinal parasites that they are sick. Of course the intestinal parasite has been used as a text for agitation in order to interest the public and legislators in the necessity for public health measures. For this purpose it is perhaps necessary to exaggerate the importance of the parasites. On the other hand, it is not necessary for medical men to accept this exaggeration.

situated on the stem of the Y or at the apex of the V. Twenty-one cases have been reported in the literature. In a few cases the heads have been found; but in the majority of cases the heads have not been found. In cases in which the heads have been found, there have been six suckers. These worms are usually considered to be double monsters in which two suckers have fused. Histologic examination seems to throw no light on the details of the monstrosity.

Case of Trypanosomiasis

Dr. J. A. Chatard and Dr. C. G. Guthrie, Baltimore: The patient was a man, aged 37, a native of Belgium. At the age of 22 he went to the Congo where he served twelve years. While there he had two severe attacks of amebiasis, one severe attack of blackwater fever and malaria constantly. On one occasion after a battle between eight Europeans and several hundred natives in which the mortality of the natives was high, so that their bodies remained unburied for several days, he had an obscure exanthematous disease, which many of the natives also had. This attack was characterized by high fever for four days, followed by a period of apyrexia; this was followed by the appearance of a papular eruption on an erythematous base, which was accompanied by a high fever and delirium. As he had been vaccinated he did not think it was small-pox. For eleven years he was located in the forest where sleeping-sickness was unknown, but later he was located in a sleeping-sickness country. There he had a febrile attack, which was followed by cervical lymphadenitis, depression, dizziness, lassitude, fever without chills, and increased appetite.

Aspiration of one of the cervical lymph-nodes revealed living trypanosomes. He was treated with atoxyl intramuscularly and tartar emetic intravenously. In nine weeks his symptoms disappeared. He was sent home to Antwerp and during the voyage the treatment was continued. When he reached Brussels the trypanosomes were absent. Although he was told that he must continue the treatment indefinitely he discontinued it at the end of the month because he had no symptoms. He came to the United States in 1909. In 1910 he had an attack of fever which was cured by quinin. In July, 1912, he became drowsy and his cervical lymph-nodes again enlarged and his other symptoms returned. He was very emotional and had some ataxia. The spleen was enlarged and hard and there was general enlargement of the superficial lymph-nodes. His blood showed a secondary anemia; there was a leukocyte count of 1,400; polymorphonuclear neutrophils, 40 per cent.; small mononuclears 54 per cent. Examination of the fresh blood was negative for parasites. Concentration methods were negative for trypanosomes. Aspiration of one of the enlarged cervical lymph-nodes showed no motile trypanosomes. Then one of the enlarged cervical lymph-nodes was removed and implanted into six rats. All six rats developed trypanosomes. Inoculation of rats with the patient's blood and the sediment of the cerebrospinal fluid failed to produce trypanosomes in the inoculated animals. After the intravenous injection of salvarsan the symptoms disappeared. The patient had a relapse two months later. He has been lost sight of.

DISCUSSION

Dr. John M. Swan, Rochester, N. Y.: It seems likely that the beginning of the infection in this patient may be detected in the attack of fever followed by the papular eruption which occurred just after the battle between the Europeans and the natives. This exanthem would correspond pretty closely to the eruption described as being one of the early mani- festations of trypanosomiasis.

Dr. Edward R. Stitt, Washington: It is well known that perfectly well people can have trypanosomes in their peripheral blood without showing evidences of infection.

The Species of Anophelines Concerned in the Transmission of Human Malaria

Dr. Frederick Knab, Washington, D. C.: The habits of all anophelines are not alike. The study of malaria will be advanced by the study of the habits of these mosquitoes, and such a study ought to help to solve the remaining problems in the natural history of malaria. There are thirty-four species of Anopheles mosquitoes in the United States, of which eight are known to transmit malaria. Other species may be proved in the future to be potential hosts of the malarial parasites. The appetite for blood varies very much in the different species of anophelines and efficient hosts may be found among those mosquitoes having such an appetite. The association of certain species with men, the longevity of the species, and the topographic conditions of the country are also factors in the solving of the malarial problems. No phase of the life-cycle of the mosquito should be neglected in the study of the disease; it is just as important to study the larva and the pupa as it is to study the imago.

DISCUSSION

Dr. Creighton Wellman, New Orleans: A study of the lists of mosquitoes which have been published as being indigenous to New Orleans makes one suspect that a great deal of careless determination of species has occurred. The careful determination of species and the locality in which they occur cannot be too particularly insisted on.

Dr. Malcolm Watson, Klang, Federated Malay States: It is quite important to determine the species of Anopheles mosquitoes found in certain localities. It is useless to say that because Anopheles mosquitoes are present, therefore malaria must also be present. In the Federated Malay States the determination of species is absolutely essential if antimalarial measures are to be successful and economical. We cannot say from experience in one country what sanitary measures will be required in another.

Dr. C. S. Ludlow, Washington, D. C.: *Myzomyia ludlowi* is not thought to breed in fresh water, but the specimens from which the species was originally named were taken from fresh water. There is a species of malaria-carrying mosquito in the Philippine Islands which breeds in soap-suds water.

Dr. H. R. Carter, Baltimore: The determination of anophelines is frequently of importance in telling the sanitarian what he need not do. For instance, *Anopheles malefactor*, which breeds in collections of water, in hollow stumps on the Isthmus of Panama, is not a malaria carrier, and this knowledge is estimated to have saved the Canal Commission from $150,000 to $200,000 in its malarial work.

Dr. Edward R. Stitt, Washington, D. C.: At Canacao no malaria-carrying mosquito other than *Myzomyia ludlowi* is found. The highest salt content of the water at that place was 400 parts per million.

Dr. Elmer F. Otis, Peñuelas, Porto Rico: Malaria is restricted to the coast regions in Porto Rico, with one exception. In the hilly region in which malaria is present, the disease is brought from the coast by the natives who travel from the latter to the former.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE: State Society and Homeopathic, Dover and Wilmington, June 17-19. Secretary of the Medical Council, Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

ILLINOIS: Coliseum Annex, Chicago, June 17-19. Acting Sec., Mr. Amos Sawyer, Springfield.

KANSAS: Topeka, June 10. Sec., Dr. H. A. Dykes, Lebanon.

MARYLAND: Regular, 1211 Cathedral St., Baltimore, June 17. Sec., Dr. J. McP. Scott, Hagerstown; Homeopathic, Baltimore, June 13-14. Sec., Dr. O. N. Duvall, 1817 N. Fulton Ave.

MICHIGAN: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MISSOURI: Gymnasium of St. Louis University, St. Louis, June 16-18. Sec., Dr. J. A. B. Adcock, Jefferson City.

MONTANA: Senate Chamber, Capitol Bldg., Helena, July 8. (First special examination held aside from regular semi-annual examinations.) Sec., Dr. William C. Riddell, Helena.

NEW JERSEY: Capitol Bldg., Trenton, June 17-18. Sec., Dr. H. G. Norton, 429 E. State St., Trenton.

NEW YORK: June 24-27. Chief of the Examinations Division, Harlan H. Horner, Department of Education, Albany.

NORTH CAROLINA: Morehead City, June 12. Sec., Dr. Benjamin K. Hays, Oxford.

PENNSYLVANIA: Harrisburg, Philadelphia and Pittsburgh, June 23-25. Sec., Mr. Nathan C. Schaeffer, Department of Public Instruction, Harrisburg.

SOUTH CAROLINA: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St.

TEXAS: Capitol Bldg., Austin, June 24-26. Sec., Dr. W. L. Crosthwait, Suite 1110 Amicable Bldg., Waco.

VIRGINIA: Richmond, June 24-27. Sec., Dr. Herbert Old, Norfolk.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

WYOMING: State House, Cheyenne, June 25-27. Sec., Dr. J. B. Tyrrell, Laramie.

California April Report

Dr. Charles B. Pinkham, secretary of the California State Board of Medical Examiners, reports the written examination held at San Francisco, April 1-4, 1913. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 106, of whom 76 passed, including 12 osteopaths, and 30 failed, including 12 osteopaths. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of California	(1902) 93.6, (1907) 80.2,	84
Coll. of Physicians and Surgeons, San Francisco	(1909)	87.1
Cooper Medical College	(1912) 75, 81.6,	89.9
Hahnemann Medical College of the Pacific	(1912)	75.6
Gross Medical College	(1893)	91.1
Denver College of Medicine	(1888)	85.6
Denver and Gross College of Medicine	(1910)	88.5
University of Colorado	(1909) 89.8; (1910)	83.8
Northwestern University Medical School, (1894) 84.7; (1905) 88.3 (1908) 85.7; (1911) 79, 84.4, 86.8.		
Northwestern University Woman's Medical School, (1897) 88.1; (1899) 81.4.		
Hahnemann Medical College and Hospital, Chicago	(1902)	81.2
Chicago College of Medicine and Surgery	(1912)	84
Rush Medical College, (1893) 91.8; (1899) 86.9; (1902) 91; (1911) 88.1; (1912) 86.9.		
College of Physicians and Surgeons, Chicago, (1896) 82.8; (1900) 84.8; (1902) 80.8; (1906) 77.5; (1907) 90.3; (1912) 75.		
Bennett Medical College, Chicago	(1900)	85.1
State University of Iowa, College of Medicine	(1908)	86.4
Hospital College of Medicine, Louisville	(1901)	85.8
University of Maryland	(1909)	81.6
Johns Hopkins University Medical School, (1909) 93.7; (1910) 93.3.		
Baltimore University School of Medicine	(1899)	80.5
University of Michigan, Dept. of Med. and Surg.	(1912)	88.4
Detroit College of Medicine	(1893)	94.8
Univ. of Minnesota, School of Med., (1901) 82;	(1911)	89.9
Univ. of Minnesota, Homeopathic College	(1895)	81.6
University Medical College, Kansas City	(1899)	80.4
Central Medical College, St. Joseph	(1898)	82.5
Creighton Medical College	(1911)	77
Lincoln Medical College	(1906)	77.2
Bellevue Hospital Medical College	(1897)	90.9
Cornell Univ. Medical College	(1907) 81.1; (1911)	83.5
Syracuse University	(1912)	84.5
Columbia University	(1910)	90.5
Long Island College Hospital	(1911)	82.3
Cleveland Homeopathic Medical College	(1904)	78.9
Willamette University	(1904)	81.6
Jefferson Medical College, (1888) 86.7; (1907) 95.1;	(1908)	89.6
University of Pennsylvania	(1904)	77
University of Montpellier, France	(1910)	78.3
University of Edinburgh, Scotland	(1906)	85.3

FAILED

College	Year Grad.	Per Cent.
Hahnemann Medical College of the Pacific	(1912)	72.5
College of Physicians and Surgeons, San Francisco, (1911) 15.1; 67.3; (1912) 70.6.		
Denver and Gross College of Medicine	(1906)	73.1
College of Physicians and Surgeons, Chicago	(1912)	70.2
Medical College of Indiana	(1904)	62.6
Hospital College of Medicine, Louisville	(1896)	74.3
University of Maryland	(1883)	79.5*
Medical School of Maine	(1896)	61.3
Missouri Medical College	(1886)	70.1
Barnes University	(1908)	67.6
Omaha Medical College	(1895)	74.3
Laura Memorial Woman's Medical College	(1903)	60.9
Eclectic Medical College, Cincinnati	(1903)	69.5
University of Pittsburgh	(1911)	70.9
University of Nashville	(1902)	79.2*
Tennessee Medical College	(1908)	63.8

* Fell below the required average in certain subjects.

The following questions were asked:

PATHOLOGY

Answer ten questions only: 1. Describe the *difference* between infiltration and atrophy. 2. Describe the difference between simple atrophy and brown or pigmentary atrophy. 3. What changes are likely to take place in the musculature of the heart as the result of debilitating or lingering disease? 4. Describe the changes in the heart muscle from (*a*) partial coronary obstruction, (*b*) complete coronary obstruction. 5. What pathologic condition causes hemoglobinuria? 6. Describe the difference you would expect to find between the pathologic finding in nephritis caused by acute infection and nephritis caused by arteriosclerosis. 7. Describe the pathologic changes resulting from destructive disease of the adrenals. 8. Describe the difference in the *pathologic* changes which take place in the lung in acute bronchitis from those which occur in bronchopneumonia. 9. Describe the *condition you* would expect to find in the lung after death from acute pulmonary edema. 10. What pathologic changes in various parts of the body result *from* destructive disease of the pancreas? 11. How do the structural changes found in the thyroid in exophthalmic goiter differ from the changes which occur in the simple or more benign forms *of goiter*? 12. Describe the pathologic findings in the brain after death resulting from senile dementia.

ANATOMY

Answer ten questions only: 1. Describe the greater omentum. 2. (*a*) Name the important structures in relation with the inferior thyroid artery. (*b*) *Give the* branches of the inferior thyroid artery. 3. (*a*) Name the vessels and nerves of the pericardium. (*b*) Describe the serous pericardium. 4. What are the main channels for carrying on the circulation when the common femoral artery is tied? 5. Describe the deep palmar *fascia*. 6. Name five *forms* of joints and give one example of each. 7. Describe the arrangement of the bones of the foot. 8. Locate the following structures with reference to the anterior *abdominal* wall: (*a*) jejunum; (*b*) ileum; (*c*) hepatic flexure; (*d*) cecum; (*e*) sigmoid flexure. 9. Describe the *azygos* veins. 10. Describe the suprarenal glands. 11. (*a*) Name the muscles of the posterior humeral region; (*b*) the anterior radio-ulnar region. 12. Give the surface markings of the heart and locate the valves with reference to anterior chest wall.

HISTOLOGY

Answer ten questions only: 1. What microscopic features would enable you to distinguish a section of the cornea from one of the epiglottis, both made perpendicularly *to the* surface? 2. Name the varieties of cartilage, a location where each is found and describe in detail one variety. Make a drawing. 3. Describe the several varieties of white blood-corpuscles found in the human blood. Make drawings. 4. What microscopic features would enable you to distinguish a section through *lung tissues* from one through omental tissue? Make drawings or diagrams. 5. How would a section from the cortex of the kidney differ microscopically from one from the pancreas? 6. What microscopic characteristics would enable you to distinguish between a longitudinal section through voluntary-muscle tissue and a transverse *section* through dried bone? Make drawings or diagrams. 7. Describe the most prominent microscopic feature of a section of the scalp made perpendicularly to the surface. Make drawing or diagram. 8. Compare a section from the sublingual gland with one through a sebaceous gland, describing the microscopic features. 9. *Compare* the microscopic structure of the uterine mucous membrane with the mucous membrane of the cardiac end of the stomach. Illustrate differences with drawings. 10. Describe a nerve fiber such as is found in a peripheral nerve distributed to a voluntary muscle, and *compare* it with one distributed to an involuntary muscle. 11. Describe all the bile passages *in* the liver. 12. Describe a cell found only in the (*a*) cerebellum; (*b*) cerebrum; (*c*) spinal ganglia. (*d*) Name a structure found only in the thymus gland, and (*e*) ovary.

BACTERIOLOGY

Answer ten *questions only*: 1. Discuss, not over one page, *Bacillus diphtheriae*. 2. Define ptomain, leukomain, symbiosis, complement, hemolysis. 3. From whence *and* how is small-pox vaccine obtained? 4. How would you confirm a diagnosis of typhoid fever? Give detail. 5. How do malarial parasites enter the blood? Give exact detail. 6. How does the *Taenia solium* propagate? 7. How would you distinguish between *Uncinaria americana* and *Tricocephalus dispar?* 8. Name five bacilli which are the cause of acute infectious diseases. 9. What rôle do amboceptors play in the destruction of bacteria in the body? 10. How would you vaccinate an individual against typhoid fever? 11. Draw a picture of a trypanosome. What disease *do they* cause in man? How does the infection take place? 12. Name five pathogenic germs which are motile.

CHEMISTRY AND TOXICOLOGY

Answer ten questions only: 1. (*a*) What are amalgams? (*b*) What are indicators? (*c*) What are alexins? (*d*) What are ptomains? 2. Give the formula of each of the following: (*a*) hydrogen peroxid; (*b*) calomel; (*c*) hydrocyanic *acid*; (*d*) arsenious acid; (*e*) benzene. 3. How can nitrous oxid be distinguished from oxygen? 4. What keeps casein in solution in milk? What effect does carbon *dioxid have on casein?* 5. Discuss the constituents of urinary calculi. 6. Describe in detail three methods for determining the presence of glucose in a mixture. 7. Mention at least ten ways by which a poison is influenced. 8. Explain how a *mixture of* borax and milk is a good general antidote. 9. Why should alcohol never be given when *tannin in any form* is used as an antidote? 10. How would you detect the presence of salicylic acid in food? 11. What poison *would you suspect had caused death, if the odors* became more marked on opening the body? 12. Under what conditions may fatal poisoning be caused by tomatoes and potatoes?

OBSTETRICS

Answer ten questions only: 1. Describe proper methods of administering an anesthetic during labor, with indications for its use. 2. *Discuss* the matter of spinal anesthesia during labor. 3. Describe the proper procedure in threatened mammary inflammation. When abscess follows, *what is the usual source of infection?* 4. Give etiology of and description of puerperal psychosis. 5. *How does* primary and secondary abdominal pregnancy differ? Which is most common? 6. In diagnosis of transverse position, shoulder presenting (D. L. A.) where would the (*a*) head be found? (*b*) the breech? (*c*) *the back?* 7. *How would you proceed* to convert a presenting shoulder into a vertex position? 8. Describe case of decidual endometritis, giving its influence on *pregnancy*. 9. Give the conjugate diameter of the pelvis below which you would consider the induction of premature labor advisable. 10. Give the more common successful methods of dilation of the cervix during labor. 11. Give the names of the bones and articulations of the obstetric pelvis, describing what constitutes *the true and false* pelvis. 12. Discuss matter of intra-uterine irrigation following complete abortion.

GENERAL DIAGNOSIS

Answer ten questions only: 1. Differentiate auricular *fibrillation* from heart-block. 2. Give the symptoms and physical findings in prostatic hypertrophy. 3. Differentiate acromegaly from myxedema. 4. Give a clinical description *of* erysipelas. 5. A patient, otherwise in good condition, who has been operated on a few days previous for varicose veins of the thigh, *suddenly* develops dyspnea, cyanosis, unconsciousness and death. What is the probable diagnosis? 6. Differentiate cerebral hemorrhage from *the syncope of acute alcoholism.* 7. Describe the sequence of symptoms and signs in tuberculosis of the hip-joint. 8. Name five acute infectious diseases characterized by a skin eruption, and give the time it occurs in relation to initial symptoms and the appearance of the eruption in each. 9. Give the diagnostic, chemical and microscopic findings in the urine in a case of chronic parenchymatous nephritis (large white kidney). 10. Describe *a case of chlorosis.* 11. Give the symptoms and physical findings in acute pericarditis. 12. Name the clinical varieties of liver hypertrophy and give the diagnostic points in abscess of this organ.

GYNECOLOGY

Answer ten questions only: 1. Describe the structures composing the pelvic floor. 2. What are the *anatomic conditions which may* lead to retroversion of the uterus? 3. Name and describe the ligaments of the uterus. 4. In what portion of the genito-urinary tract is cancer most likely to occur and what conditions predispose thereto? 5. Give the diagnosis of cervical carcinoma, (*a*) *clinical*, (*b*) microscopic. 6. Differentiate a right salpingitis from appendicitis. 7. Give the clinical and physical findings in a ruptured ectopic gestation. 8. Name the *conditions which may cause* metrorrhagia. 9. A patient states that she has not menstruated for six weeks; differentiate two conditions that might be causing the amenorrhea. 10. Name the instruments required and the positions in which the patient may be placed for a thorough gynecologic exami [illegible] a strangulated *femoral* hernia from ingui [illegible] Give a diagnosis in detail of gonorrheal [illegible] *genito-urinary* tract not including the kidney.

PHYSIOLOGY

Answer ten questions only: 1. Give evidence of *tonic* activity of the spinal cord. 2. What *phenomena occur following section of a* lateral half of the spinal cord? 3. Why are the muscles of respiration not affected in hemiplegia? 4. Describe the natural defect of the eye known as *astigmatism.* 5. What is the *approximate time* required for a complete circulation of the blood? 6. *Discuss* the automatic action of the heart. 7. *Discuss* the regulation of the circulation in the brain. 8. To what structures are (*a*) vasoconstrictor nerves, (*b*) *vasodilator nerves* distributed? 9. Is the exchange of gases in the lungs entirely explained by the *laws of diffusion?* *Give* reason for your answer. 10. Describe intestinal peristalsis. 11. What is the digestive *action of saliva?* 12. What is the composition of sweat and to what *extent* may it be compensatory for lack of activity *of* the kidneys?

HYGIENE

Answer ten questions only: 1. What causes tetanus? Under what conditions is tetanus most likely to develop? What would you do to prevent the development of tetanus in an individual case? 2. *Name diseases* that may be carried by water. 3. What classes of patients should avoid living in altitudes of over 5,000 feet? 4. What is the most common cause of blindness in infants? How would you combat it? 5. Name three diseases that are spread by the improper disposal of human excreta. How does each of these diseases get into the human body? How should excreta be disposed of in order to eliminate these diseases? 6. Who first discovered and announced *the* value of vaccination for the prevention of small-pox? What observation *of his* led to this discovery? Give approximate date of his discovery. 7. How is diphtheria disseminated; how does it *enter* the system and what should a municipality do to eliminate it? 8. *Name* three diseases *that* are spread by flies. What methods should be used to prevent and kill flies? 9. What other insects besides flies *carry* diseases to human beings? *What* variety of mosquito carries yellow fever; What variety of mosquito carries malarial fever? *What should* be done to rid a community of the mosquito? 10. What sanitary measures should be adopted in the *care* of a typhoid patient? 11. What is the difference between asepsis and antisepsis? Who first announced a system of *antiseptic* surgery? Approximate date of his birth and death. 12. What should be *done* to prevent spread of venereal *diseases* in a municipality? In the army and navy?

Illinois January Report

Mr. Amos Sawyer, *acting* secretary of the Illinois State Board of Health, reports the written examination held at Chicago, Jan. 22-24, 1913. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of physicians examined was 106; *of whom* 57 passed and 43 failed. Six candidates did *not complete the* examination. Of "other practitioners" 49 were examined, of whom 15 passed, 33 *failed* and one withdrew. There were also 42 midwives examined, of whom 26 passed and 16 failed. For the physicians *examined, the* following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined
George Washington University	(1906,1) (1910,2)	3
Northwestern University Medical School	*(1910,1) (1911,1)* (1912,3)	5
Rush Medical College	*(1912)*	4
University of Illinois	(1911,3) (1912,6)	9
Bennett Medical College	(1911,2) (1912,7) (1913,4)	13
Chicago College of Medicine and Surgery	(1911,2) (1912,5) (1913,2)	9
Hahnemann Med. College and Hospital, Chicago	(1912)	1
Illinois Medical College	(1910)	1
Reliance Medical College	(1911)	2
State University of Iowa, College of Medicine	(1908)	1
Harvard Medical School	(1910)	1
University of Michigan, Dept. of Med. and Surg.	(1910)	1
Barnes Medical College	(1898)	1
Albany Medical College	(1909)	1
New York University Medical College	(1893)	1
Syracuse University	(1909)	1
Jefferson Medical College	(1912)	1
Baylor University	(1910)	1
Milwaukee Medical College	(1910)	1

FAILED

College	Year Grad.	Total No. Examined
Hahnemann Medical College and Hospital, Chicago	(1910,1) (1911,1) (1912,1)	3
Bennett Medical College	(1911,1) (1912,5)	6
American College of *Medicine and Surgery*, Chicago	(1905)	1
Chicago College of Medicine and Surgery	(1911,2) (1912,5)	7
Hering Medical College	(1912)	1
Illinois Medical College	(1910)	1
Jenner Medical College	(1910,1) (1912,2)	3
National Medical *University*	(1903,1) (1909,2)	3
Reliance Medical College	(1911)	2
University of Illinois	(1912)	5
Hospital College of Medicine, Louisville	(1904)	1
Barnes Medical College	(1898,1) (1905,1) (1910,1)	3
St. Louis College of *Physicians* and Surgeons	(1910)	1
Meharry Medical College	(1904,1) (1910,1) (1912,2)	4
Medical College of Virginia	(1877)	1
University of Naples, Italy	(1907)	1

Georgia Homeopathic May Report

Dr. R. E. Hinman, secretary of the Homeopathic Board of Medical Examiners of Georgia, reports that at the meeting held at Atlanta, May 8, 1913, three candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Maryland Medical College	(1905)	Maryland
New York Homeopathic Medical College and Hospital,	*(1884)*	New York
Cleveland Homeopathic Medical College	*(1901)*	*Michigan*

Nevada May Report

Dr. S. L. Lee, secretary of the Nevada State Board of Medical Examiners, reports the written *examination held* at Carson City, May 5-7, 1913. The number of subjects examined in was 13; total number of questions asked, 100; percentage *required to pass, 75. The total number* of candidates examined was 3, all of whom passed. Seventeen candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
College of Physicians and Surgeons, *Baltimore*	*(1883)*	75.2
Columbia University, College of Phys. and Surg.	(1907)	90.8
Ohio Medical University	(1904)	76.4

LICENSED THROUGH RECIPROCITY

College	Year Grad.	*Reciprocity* with
Georgia College of Eclectic Med. and Surgery	*(1912)*	Georgia
Rush Medical College	*(1904)*	Illinois

Bennett Medical College	(1909)	Illinois
Indiana University	(1910.2)	Indiana
University of Kansas	(1907)	Missouri
University of Louisville	(1908)	Georgia
Maryland Medical College	(1911)	Penn.
Atlantic Medical College	(1909)	W. Virginia
University Medical College, Kansas City	(1904)	Kansas
St. Louis College of Physicians and Surgeons	(1895)	Iowa
Cleveland Homeopathic Medical College (1904) Kentucky;	(1905)	Penn.
Western Pennsylvania Medical College	(1901)	Penn.
University of the South	(1899)	Oklahoma
University of Vermont	(1911)	Vermont
Laval University, Montreal	(1898)	Minnesota

Book Notices

The Interpretation of Radium. Being the Subject of Six Free Popular Experimental Lectures Delivered at the University of Glasgow. By Frederick Soddy, M.A., F.R.S., Independent Lecturer in Physical Chemistry and Radio-Activity in the University of Glasgow. Third Edition. Cloth. Price, $2. Pp. 284, with 32 illustrations. New York: G. Putnam's Sons, 1912.

The great generalizations of science and their interpretation are among the finest exercises of the human mind. It would be rash to speak of any one of them as the most fascinating. Newton's law of gravitation, Joule's law of the conservation of energy, Dalton's atomic theory, all these in their application to the interpretation of physical phenomena offer exercises of the mind that are unsurpassable in their appeal to the imagination. The latest achievement of this sort is the interpretation of the phenomena of radio-activity, as manifested by a few chemical elements of which radium is the most notable. These phenomena have brought us face to face with new and absolutely unexpected facts; here are substances which have all the characteristics of chemical elements, but are the source of relatively enormous quantities of spontaneous energy—a new source of energy in our universe; a new fundamental fact in physics, of application so wide as to stagger the imagination. The interpretation of these phenomena has brought an equally startling shock to our chemical concepts. The atom has stood through all the development of modern chemistry as the final analysis of matter—the prototype of the unchangeable. In Clark Maxwell's famous words, quoted by Soddy, "None of the processes of Nature, since the time when Nature began, have produced the slightest difference in the properties of any molecule (atom)." And now we have the fact that the energy arising in radio-active substances is nothing less than the product of spontaneous disintegration of these selfsame atoms. We have a fact in physics that leaves us no longer in want of a satisfactory explanation of all of the energy that the astronomical universe manifests. It may not all be derived from this source, but this source might easily supply it. There may be more fascinating and far-reaching conceptions in science than those arising from the interpretation of radio-activity, but they are hard to imagine.

Soddy is one of the creators of this fascinating subject: to him with Rutherford is due the explanation of the origin of the energy of radio-activity elements in their spontaneous disintegration. In addition to his high scientific originality, he is one of those rare men, apparently the peculiar product of English genius, who have the capacity of putting great scientific facts into vivid popular form. This combination of qualities has produced in this book an engrossing narrative of science. When delivered in lecture form it must have carried his hearers back to the gre. . popular lectures on physical science by Humphry Davy a hundred years ago. The work is commended to every one who has any scientific imagination.

Occasional Papers on the Prevention of Some Common Diseases in Childhood. By J. Sim Wallace, D.Sc., M.D., L.D.S., Dental Surgeon and Lecturer on Dental Surgery and Pathology, London Hospital. Cloth. Price, 3 shillings, 6 pence. Pp. 103. London: Baillière, Tindall & Cox, 1912.

Approving the reputed dictum of Osler that more physical deterioration is produced by defective teeth than by alcohol, Wallace in several chapters expresses some rather unusual ideas regarding certain common diseases of infancy and childhood. He emphasizes particularly the error in the accepted modes of feeding children on a soft or "slop" diet, with a resulting caries of the first set and imperfect development of the permanent set of teeth. He says that from 95 to 100 per cent. of children 6 years old or less have carious teeth, with resultant defective development and disease. He also says that 15 per cent. of children 14 years old also have defective teeth. His statistics may be correct so far as they apply to Great Britain; they are certainly exaggerated so far as the United States is concerned. He then proceeds to outline a physiologic diet to be taken in a physiologically arranged manner, so that the first set of teeth will be conserved and that the permanent set will be properly developed and not subject to caries. He lays emphasis on the necessity of giving food which gives exercise to the teeth and gums and at the same time has a cleansing effect, so that food particles may not be allowed to remain in the mouth. He also insists that the diet as arranged by him will not only prevent the overgrowth of pathogenic bacteria, but will also encourage saprophytes which are really beneficial. Wallace also expresses the belief, and gives figures to show, that adenoids occur most frequently in children who sleep in open, well-ventilated rooms rather than among those who sleep in closed rooms during damp and cold weather. Among the other subjects treated in this book are the prevention of tuberculosis, a further chapter on prevention of dental caries, and one on infant mortality and milk. The author has definite ideas on all these subjects, and one must give him credit for expressing them vigorously, whether one believes them or not.

Doc Williams. A Tale of the Middle West. By Charles H. Lerrigo. Cloth. Price, $1.25 net. Pp. 329. New York: Fleming H. Revell Company, 1913.

An uneducated old man of high principles, great knowledge of human nature and most lovable character practices medicine by virtue of the years of practice clause in a way which we would ordinarily call quackery, but which is highly satisfactory to a large following of people. He raises a foundling and sends him to medical school. The conflict in the young man's mind between scientific medicine on the one hand, and his loyalty and devotion to the old man in spite of his questionable methods on the other, form an interesting part of the book. We are glad to see this book before the people. Well written, with a love story and detective complications cleverly interwoven, it will bring to its readers some very pertinent truths concerning quackery and scientific medicine. The success of the lovable old man, in spite of his lack of training, comes out very clearly and the reader realizes the great power for benefit that there is in the patient's confidence in his attendant, even though the attendant lack modern methods. The importance of vital statistics, a national department of health, and serum therapy are made clear on the one hand, while on the other are brought out the value of common sense, natural living, old-fashioned philosophy and faith in God. The author, Dr. Lerrigo, is a member of the Kansas State Board of Health, and we congratulate him on his work.

Cardiovascular Diseases. Recent Advances in Their Anatomy, Physiology, Pathology, Diagnosis and Treatment. By Thomas E. Satterthwaite, A.B., M.D., LL.D., Consulting Physician Postgraduate Hospital. Cloth. Price, $2 net. Pp. 166, with 80 illustrations. New York: Lemcke & Buechner, 1913.

This is a revision of twelve brief essays previously published in medical journals. Topics such as the arhythmias, malpositions of the heart, cardiovascular thromboses, myocardial disease and malignant endocarditis are discussed. There is also consideration of some of the newer discoveries relating to the anatomy and physiology of the heart, as well as of instruments used in studying the heart and vessels, the various sphygmomanometers, polygraphs, the electrocardiagraph, etc. Much of what is said is excellent; much seems to have been gathered from reading rather than from actual laboratory or clinical experience. The book is not one to be consulted for complete and accurate knowledge concerning these topics, though it contains a great deal that is suggestive and of interest.

TRAVAUX DE CHIRURGIE ANATOMO-CLINIQUE. Par Henri Hartman. Professeur à la Faculté de Médecine: Chirurgien de l'Hôpital Bichat. Avec la Collaboration de B. Cunéo et Paul Lecène, professeurs agrégés, chirurgiens des hôpitaux; Küss, prosecteur à la Faculté; Delamare. V. Henry et Lebreton, anciens internes des hôpitaux. Series 4: Voies Urinaires. Paper. Price, 16 francs. Pp. 472, with 132 illustrations. Paris: G. Steinheil, 2, Rue Casimir-Delavigne, 1913.

This volume is a review of 1,787 operations performed by Dr. Hartman on the organs of the urinary tract; 113 patients died. The deaths are detailed, giving the operation performed, the cause of death and usually the necropsy findings. Operative technic is minutely described, and indications and contra-indications for operation carefully reviewed. The term "periurethral adenomyoma" is suggested to displace the commonly used term "hypertrophy of the prostate." Perineal prostatectomy by a lateral incision is described and condemned as giving 50 per cent. of incontinence.

An operation for exstrophy of the bladder is described which consists in making an artificial bladder with a piece of intestine: one end of this intestinal segment is implanted between the rectal mucous membrane and the rectal sphincter, giving the individual control of the urine. The operation is done in two stages, and the result in two cases has been good. The patient is able to hold the urine two or three hours during the day, but during the night there is incontinence. In neither of these two cases has there been any sign of urinary infection. Among the 133 nephrectomies reported, the pleura was never injured. The only complications were opening of the peritoneal cavity and hemorrhage: the hemorrhage was due in one case to the tearing of the vena cava. In this series there were four deaths. This work is an excellent contribution to the surgery of the genito-urinary tract.

DISEASES OF THE HEART AND AORTA. By Arthur Douglass Hirschfelder, M.D., Associate in Medicine, Johns Hopkins University, with an Introductory Note by Lewellys F. Barker, M.D., LL.D., Professor of Medicine, Johns Hopkins University. Second Edition. Cloth. Price, $6. Pp. 738, with 334 illustrations. Philadelphia: J. B. Lippincott Company, 1913.

It is a pleasure to note that the favorable comment made by us in reviewing the first edition of Hirschfelder's work has been justified by its cordial reception, and a demand within a short space which has made necessary the publication of a second edition. It is with added pleasure that we find that this edition is more than a reprint of the first. Something like 100 pages have been added and there has been a sincere and successful effort to bring the subject up to date. There is much new material concerning the electrocardiagraph and its bearing on questions of cardiac physiology, pathology, symptomatology and the effects of drugs, notably digitalis. The subject of arteriosclerosis has been revised; consideration has been given to acapnia and kindred topics. New illustrations, many of them Hirschfelder's own, are added. There is a touch of originality about Hirschfelder's diagrams. While some may not be classed as artistic there are few that are not instructive, and many of them are truly ingenious. The book has an individuality of its own, is not made after the stock pattern and is to be most highly commended to the student seeking scientific knowledge concerning the heart and its diseases.

TABULAR DIAGNOSIS. An Aid to the Rapid Differential Diagnosis of Diseases. By Ralph Winnington Leftwich, M.D. Cloth. Price, $2.10 net. Pp. 359. New York: Longmans, Green and Company, 1913.

This is a very complete presentation of the contrasting differentiating symptoms of diseases. On each page two diseases are contrasted. In addition to the differentiating symptoms thus given, symptoms common to both are enumerated at the bottom of the page, with frequent references to similar diseases contrasted elsewhere in the volume, and explanations of new or imperfectly known signs which have been named. The tables include contrasting signs obtained by microscopic and other laboratory methods. The book is the most complete of any of the kind that has come to our notice and seems to be brought well up to date. A careful reading of many of the tables has not revealed errors.

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioners' Index. Thirty-First Year. Cloth. Price, $3.50. Pp. 628, with 152 illustrations. New York: E. B. Treat & Co., 1913.

An examination of this year-book shows a wealth of material well arranged and presented in a form for ready reference. The articles are alphabetically arranged but classified in different sections according to the general subject to which they relate. Much prominence is given to new remedies, and a large number of articles in connection with them are abstracted. While some allowance must be made for a certain neutral attitude of the abstracter or reporter, the impression is nevertheless gained that a more critical selection of the material should have been made. The article on digalen by Moore has received severe criticism by Hatcher, but no notice is taken of this criticism.

On the whole, the book is well made and the illustrations are excellent. It is presented in a single convenient volume.

MEDICAL LABORATORY METHODS AND TESTS. By Herbert French, M.A., M.D., F.R.C.P., Assistant Physician, Guy's Hospital. Third Edition. Cloth. Price, $1.50 net. Pp. 202, with 88 illustrations. Chicago Medical Book Company, 1912.

Since this manual has reached its third edition, it has evidently given good service to those who need an elementary guide in urinalysis and blood examinations. The ordinary processes of urinary examination are well described. Gastric analysis, on the other hand, appears to have been regarded as a sort of rare exercise which the doctor might try if the patient should happen to vomit. Incidentally the composition of test-meals is given and the use of the stomach tube recommended in cases requiring particular investigation. A similar limited view of examination of the feces appears to prevail in the author's neighborhood. Nevertheless the book is a handy volume which may supply the need of some diagnosticians.

MILK AND ITS PRODUCTS. A Treatise on the Nature and Qualities of Dairy Milk and the Manufacture of Butter and Cheese. By Henry H. Wing, Professor of Animal Husbandry in Cornell University. Cloth. Price, $1.50 net. Pp. 433, with 61 illustrations. New York: The Macmillan Company, 1913.

This book is intended primarily for the dairyman, and tells about the judging of cows and the production of milk, butter and other milk products, from the point of view of the dairyman. Interesting chapters are those on the bacteriology of milk, the production of certified milk, the manufacture of ice-cream and of the various cheeses, legal standards for dairy products, dairy laws, etc. Numerous references to reports and bulletins bearing on the production of milk are also given. The book is one of the rural science series of Cornell University, and in its revised and enlarged form, after many printings, is a standard book on dairy practice.

AIDS TO TROPICAL HYGIENE. By Major R. J. Blackham, D.P.H. (Lond.), R.A.M.C., Divisional Sanitary Officer, First Division, Indian Army. Cloth. Price, $1.25 net. Pp. 192. New York: William Wood & Co., 1912.

Major Blackham, for many years on duty in India, presents a vast amount of information regarding tropical hygiene. He takes up successively climate and meteorology; air and ventilation; water and water-supplies; food and feeding; clothing; sites, soils and houses; disposal of refuse; disposal of the dead; insects and disease; animal parasites; prevention of malaria, and disinfectants and disinfections. Appended are two valuable tables, one indicating the preventive measures in tropical diseases, and the other showing the distinctive characters, in the various stages, of the more important species of flies found in houses.

JAHRBUCH FÜR ORTHOPÄDISCHE CHIRURGIE. Von Dr. Paul Glaessner, orthopädischer Assistent der chirurgischen Universitäts-Poliklinik in der Kgl. Charité zu Berlin. Volume 3, 1911. Paper. Price, 6 marks. Pp. 122. Berlin: Julius Springer, 1912.

This is a summary of orthopedic publications appearing during 1911. It reviews in a brief, concise and critical manner a large number of articles covering the orthopedic field. An extensive bibliography is appended.

Medicolegal

Joining Causes of Action for Unauthorized and Unskillful Performance of Operation—Sufficiency of Consent to Operation before Examination—Measure of Damages—Skill Required

(Van Meter vs. Crews (Ky.), 148 S. W. R. 40)

The Court of Appeals of Kentucky reverses a judgment rendered for Miss Crews, the plaintiff, who charged that the defendant had operated on her without her consent and had performed the operation unskillfully, by reason of which she had suffered great pain and her health had been permanently impaired. The court says that Miss Crews had been suffering with a pain in the right side of the abdomen for about twelve or eighteen months and for two months she had been suffering with a pain on the left side of the abdomen. She called Dr. Van Meter, who, after making an examination of her, prescribed for her. After that she did not improve and he told her he was not satisfied with the examination he had made at his office and would like for her to go to the hospital, where he could make the examination more satisfactorily. She went to the hospital, and there, after the usual preparations had been made and several of her relatives had been summoned, she was placed under an anesthetic and an operation performed, which consisted in his taking out one of the ovaries and making an adjustment of the other. After that she remained at the hospital until the wound healed and then went home, but she was unable to stand straight and later had to submit to another operation, all of which, it was charged, was due to the unskillfullness of the first. The proof for the defendant showed that there was no neglect on his part and that what he did was according to the approved practice in such cases, although it turned out, in Miss Crews' case, not to relieve her.

It was insisted for the defendant that the plaintiff could not unite in the petition the allegations that the defendant performed the operation without her consent, and that he performed it unskillfully. It was said that if he performed the operation without her consent that was a trespass on her person, and that if he undertook to perform the operation with her consent, and performed it unskillfully, that was a cause of action for a breach of contract, which could not be united with an action for trespass to the person. But the court cannot see the force of this. The plaintiff had employed the defendant as her physician and had placed herself in his charge. If he operated on her without her consent, that was a breach of his duty to her; if he performed the operation unskillfully, that was also a breach of his duty. In other words, all that the defendant did was done by him as a physician, and under his employment as such. The status of physician and patient existed, and all that he did was done under that relationship. If the plaintiff was to recover at all, she must recover all her damages in one action; for, manifestly, she could not bring one action, alleging that the operation was performed without her consent, and another, alleging that it was performed unskillfully. If she could not present her whole case in one action, therefore, she would be denied remedy. Her whole case arose from the defendant's breach of duty as a physician, and she might, in one action, set up as many breaches of duty as existed. The court therefore properly refused to require the plaintiff to elect between the two grounds of recovery sued on.

The evidence heard on the trial tended very strongly to show that, though the plaintiff was averse to the operation, it was understood by her and her relatives, who were summoned to the hospital and consulted, that if, on the examination by the defendant, it was found that an operation was necessary, he would perform it while she was under the anesthetic. Both her uncle and her brother were sent for, and the matter was discussed carefully, not only with them, but with her; and, while there was some conflict in the testimony, there was evidence warranting the jury to conclude that the defendant understood, and had the right to understand, from all that passed between him and the plaintiff, that he was to perform the operation while she was under the anesthetic if, on the examination, he found that necessary. There was nothing in the evidence warranting a recovery in this action of punitive damages, as there was no evidence of bad faith, recklessness or oppression on the part of the physician.

The jury should have been instructed that, if the defendant understood, and had reasonable grounds to understand, from the words or conduct of the plaintiff that she was willing for the operation to be performed while she was under the anesthetic if, on his examination of her, he found it necessary, and on the examination he found the operation to be necessary, and he so performed it, then he had the right to perform the operation as by her consent. Reasonable grounds are such grounds as would warrant a man of ordinary prudence to so understand under the circumstances.

An instruction was radically erroneous which allowed the jury to find for the plaintiff such a sum as would fairly compensate her for her loss of health. Such a standard was too uncertain; for a jury might justly think that no reasonable amount of money would compensate a young woman for the loss of her health, and to give the jury such a measure of damages would be in effect to turn them loose without any criterion to guide them. The court should have told the jury that, if they found for the plaintiff, they should find for her in such a sum as would fairly compensate her for her pain and suffering, if any, and the permanent impairment, if any, of her power to earn money, which was the natural and proximate result of the operation being performed unskillfully, or without her consent, if it was so performed.

On another trial, the jury should be instructed that the defendant, in performing the operation on the plaintiff, was not required to possess or exercise the highest degree of skill, but in performing such operation he was bound to possess and exercise that degree of skill usually possessed by the profession of surgeons generally in that section of the country, and if the operation was performed by him with such skill, then it was not unskillfully performed, within the meaning of these instructions.

Dying Declarations Made after Refusal of Physician to Treat Abortion Case Without History—Construction of Amended Statutes with Reference to Privilege and Competency of Witnesses

(State vs. Law, (Wis.), 136 N. W. R. 803)

The Supreme Court of Wisconsin overrules all exceptions to rulings in this case wherein there was a conviction of a licensed physician of criminal abortion. The court says that one contention was that a refusal of a Dr. Dean to treat the patient until he procured from her a history of the case, either to enable him to treat her, or in his own protection, was such coercion of the patient or such inducement as to render incompetent, not only what she then and there told Dr. Dean, but all dying declarations thereafter made by her at the hospital to the same effect and under the same influence. It was argued that, having that origin, the dying declarations were tainted; no matter how frequently repeated thereafter, because of the nature of the inducement held out, the feeble condition of the declarant, and because it was shown by evidence that a person in such advanced stage of peritonitis, when septicemia has already set in, is not sufficiently conscious or intelligent to make a competent dying declaration. If the testimony relating to her mental condition were without dispute, and if the statement made to her by Dr. Dean was plainly a threat or inducement for her to make a charge against the accused, and it appeared she was still in that condition when she made the dying declarations, and still laboring under the duress or inducement of what Dr. Dean said to her, it would have been the duty of the trial court to exclude the dying declarations. But that was not the case. The statement of Dr. Dean did not suggest that she charge the accused with any crime. It was a very proper request for him to make under the circumstances. It probably had influence in inducing her to make disclosure and to tell the truth. But that was merely incidental and a charge against the accused was not the direct result of the request at all, in case the accused had done nothing wrong or criminal. Several witnesses, who saw and talked with Mrs. O'Brien, the patient, at the hospital prior to and at the time of the dying declarations, testified to her mental competency in no uncertain language. Under such circumstances, the trial court would not be justified in excluding the dying declarations, but very properly admitted them in evidence.

Two physicians, Drs. Dean and Donovan, were in attendance on Mrs. O'Brien, and learned of the facts in the case by reason of their being in attendance. This information so acquired by them, and each of them, was necessary to enable them to prescribe for her. Each was sworn as a witness for the state, and testified concerning her mental capacity at the time she made the declarations mentioned, as to the symptoms observed and treatment given her, and also to what was discovered in the autopsy conducted by them on the body of Mrs. O'Brien. There was no error in that.

Section 4075 of the Wisconsin statutes, as amended in 1911, provides: "No person duly authorized to practice physic or surgery shall be permitted to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician or to do any act for him as a surgeon." Before the amendment of 1911, the words "shall be compelled" appeared in this statute, instead of the words "shall be permitted," as the statute now reads. The amendment of 1911 brought Section 4075 more nearly in form with Section 4074, relating to confessions to clergymen, and with Section 4076, relating to communications by client to attorney. But Section 4078d provides: "No person shall be excused or privileged from testifying fully under oath in any prosecution brought under the provisions of Sections 4352 or 4583 of the statutes of 1898 or for any of the causes mentioned in either of said sections when so ordered to testify by a court of record or any judge thereof; but no person shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction, matter or thing concerning which such person may so testify or produce evidence, except for perjury committed in giving such testimony."

This prosecution was under Section 4352 mentioned. It will be observed that the opening sentence of Section 4078d is broad enough to sweep away all privilege in such cases. Whether it should be interpreted and applied as broadly as its words might indicate need not be decided here. All that is necessary to consider in this case is whether the provisions of this section take away, in prosecutions for abortion, the privilege conferred by Section 4075, as amended in 1911. The court thinks it does. Counsel for the accused sought to limit the scope of Section 4078d by the concluding sentence of that section, which provides that no person shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction, matter, or thing concerning which such person may so testify or produce evidence. The effect of such a construction would be to limit the sweeping words contained in the first sentence of the section to the privileges against self-incrimination. This the court cannot do. It restrains the statute unduly. The more reasonable interpretation is that the privilege against self-incrimination and the professional privilege of a physician are both taken away by Section 4078d; but, in order to render it valid and constitutional as to the first, the legislature added the last sentence in the nature of a proviso. This immunity from prosecution on account of anything which the accused is compelled as a witness to disclose is provided for in actions relating to miscarriage or abortion, by Section 4078d, although in this section this particular privilege is not mentioned, nor is the immunity confined to an accused person, but all privilege is apparently abolished as to all persons in respect to such criminal prosecution. Because of the nature of the crime and the necessity of resorting to medical evidence in order to establish its commission the court is satisfied that the privilege accorded by Section 4075, as amended in 1911, is, in cases like this, taken away by Section 4078d.

Testimony in the case was given by a director of the State Hygienic Laboratory and professor of bacteriology in the university, by the dean of the medical college at the state university, and by the professor of pathology at the university. None of these gentlemen had any license or certificate of registration as a physician in Wisconsin, and their testimony was challenged as incompetent under Section 1436 of the Wisconsin statutes, as amended, which reads: "No person practicing medicine, surgery or osteopathy shall have the right . . . to testify in a professional capacity as a physician or surgeon, or insanity expert in any case, unless he or she holds a license from the Wisconsin Board of Medical Examiners, or the certificate of registration hereinbefore referred to, with a diploma from a reputable medical college or society or a certificate of membership in a medical society, and has been duly recorded as a practitioner in the state of Wisconsin; provided, that nothing in this act contained shall be construed as restricting any court in a criminal action from receiving the testimony of any person as a witness." But the gentlemen mentioned were not within the statute quoted, because they were not persons practicing medicine, surgery or osteopathy; and they did not testify in a professional capacity as physicians, surgeons or insanity experts. The proviso of the statute would also remove the disqualification theretofore mentioned, so far as criminal cases are concerned. The mere fact that the science of medicine covers, includes or requires some knowledge of bacteriology, or chemistry, or botany or biology, or embryology would not exclude an expert in either of those sciences, under Section 1436 as amended.

Privilege Not Waived nor Statute Modified

(Cohodes vs. Menominee & Marinette Light & Traction Co. (Wis.), 135 N. W. R. 879)

The Supreme Court of Wisconsin says that in this personal injury case the defendant sought to elicit from the plaintiff's attending physician for about a week evidence tending to show that there was nothing serious about the alleged injuries, and that the plaintiff was endeavoring to perpetrate a fraud on the defendant, and was malingering as to her injuries for the purpose of increasing the damages. The inquiries propounded to the physician for this purpose necessarily embraced information acquired by him while he was attending the plaintiff in his professional capacity, to enable him to prescribe for her. He testified that he was called to attend her, and that whatever information he had as to the nature and extent of her injuries had been acquired by him while attending her as her physician. Such information is within the provisions of Section 4075 of the Wisconsin statutes and could not be disclosed over the plaintiff's objection. She did not waive her rights under this statute by testifying concerning her condition and the nature and extent of her injuries. Nor does the court perceive any basis for the claim that legislation requiring physicians to file death certificates in a public office and to make report of certain accident cases to local registers of vital statistics is a legislative declaration that the secrecy, as formally enjoined by the provisions of Section 4075, has been relaxed, and that the privilege thereof, in cases like this one, should be more restricted than formerly. There was no question of receiving evidence of facts embraced in any such certificate or report of the witness. The court properly restricted his examination on the points involved.

Writ of Prohibition Cannot Be Employed against Board of Examiners

(Jamieson vs. State Board of Medical Examiners (Okla.), 130 Pac. R. 923)

The Supreme Court of Oklahoma holds that the State Board of Medical Examiners in hearing charges filed before it pursuant to sections 4242-4246 of the compiled laws of Oklahoma of 1909 for the purpose of having revoked a license issued by it to practice medicine and surgery in the state, on the ground that the same was obtained through fraud, and also charging the certificate holder with unprofessional conduct, is engaged in the performance of a ministerial duty, and does not exercise judicial power, and a writ of prohibition thereto will not lie. The court says that the plaintiff in this case filed his petition in the district court of Logan county, and prayed for a writ of prohibition against the State Board of Medical Examiners, prohibiting the board from proceeding to hear and determine certain charges set forth in a certain complaint filed by the president and the secretary, respectively, of the board, the object of which was to have revoked the license of the plaintiff, theretofore issued by the board, to practice medicine and surgery in the state, on the ground that the same had been obtained through fraud; also from proceeding to hear and determine the complaint of the secretary charging him with unprofessional conduct, with the same object in view. The trial court, in effect, held the defendant to be an executive or ministerial board, to which the writ could not run. There was no error in that. The inquiry sought to be prohibited by the writ was in no sense the exercise of a judicial function by the board, and hence the writ could not rightfully run against it. A writ of prohibition will not lie to an executive or ministerial board to prohibit it from performance of ministerial or executive functions.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Obstetrics and Diseases of Women and Children, York, Pa.

May, LXVII, No. 425, pp. 849-1064

1 *Is Albuminuria Likely to Recur in Successive Pregnancies? J. M. Slemons, Baltimore.
2 *Treatment of Uterine Hemorrhage by Means of Roentgen Rays. G. E. Pfahler, Philadelphia.
3 Drug Treatment of Uterine Hemorrhages. H. C. Wood, Philadelphia.
4 Surgical Treatment of Uterine Hemorrhage from Non-Pregnant Uterus. W. Krusen, Philadelphia.
5 Thymus Death in New-Born, with Report of Case. E. P. Davis, Philadelphia.
6 Abstraction of Calcium Salts from Mother's Blood by Fetus, Cause of Rapid Progress of Tubercular Processes. J. G. Drennan, New York.
7 Idiopathic Peritonitis. A. Grotti, Columbus, Ohio.
8 Operative Treatment of Puerperal Septicemia. W. E. Darnall, Atlantic City.
9 Reaction in Those Operated on for Tuberculous Conditions. H. D. Furniss, New York.
10 Appendicitis During Pregnancy. B. Van Sweringen, Fort Wayne, Ind.
11 Ammonia Coefficient in Pregnancy with Report of Sixty Cases. A. S. Hotaling, Syracuse, N. Y.
12 Methods of Diagnosis in Lesions of Upper Urinary Tract. G. V. Brown, Detroit.
13 Rapid Dilatation and Accouchement Forcé. H. S. Lott, Winston-Salem, N. C.
14 Influenzal Meningitis. T. S. D. Grasty, Washington, D. C.

1. Albuminuria of Pregnancy.—From observations on twenty patients who were recovering from toxemia of pregnancy, Slemons found that, using the blood-pressure as a criterion, three groups can be distinguished, just as they may be from studying the urine. In every case when the toxemia was at its height the blood-pressure was high, rarely below 180 mm. Typically, the blood-pressure was higher in nephritis toxemia than in eclampsia; in the former he frequently noted a pressure of 250 mm. Furthermore, as each of these patients recovered, no matter what the underlying cause of the toxemia, the blood-pressure finally fell, but in some instances reached normal more quickly than in others. Fifteen of the twenty patients presented a blood-pressure curve which was near the normal at the end of two weeks. At this time, their general clinical condition was satisfactory and they were discharged from the hospital, though in many instances there was still a faint trace of albumin in the uncatheterized urine.

The opinion that these women had suffered from eclampsia, not from nephritis toxemia, and that they were unlikely to experience a toxemia again, has been verified in a number of instances. Two of the twenty patients in this series were observed throughout a month, and, at the end of that time, presented a blood-pressure of 175 mm. There was also a measurable amount of albumin in the urine, somewhat less than half a gram; in spite of these facts, and against advice, both these women left the hospital, insisting that they were well. One of them, however, has since passed through a normal pregnancy. The other died later and no autopsy was performed. Three of the twenty patients ran a persistently high blood-pressure for eight weeks and, therefore, seemed to the author to have some permanent kidney defect. The final observations of the blood-pressure before these patients left the hospital were, respectively, 160, 200 and 250 mm. The first had a marked albuminuric retinitis; the second gave a history of severe scarlet fever during childhood; the third has since suffered from albuminuria and coma in a second pregnancy. The author believes that such clinical facts support the conclusion based on the blood-pressure, that the kidneys were defective in these three cases.

Reviewing his observations in this series of twenty cases, Slemons is inclined to attach great importance to blood-pressure estimations during the convalescence from a toxemia of pregnancy. In this series, it appears to him that 75 per cent. of the women suffered from eclampsia and are unlikely to do so again; whereas, in 15 per cent. there was a strong presumptive evidence of a defect in the kidneys which will always complicate pregnancy. He was uncertain of the prognosis in 10 per cent. of these cases, because the pressure remained high for a month; but the subsequent experience of one of them has demonstrated that such a condition does not necessarily mean that a toxemia of pregnancy will recur.

2. Treatment of Uterine Hemorrhage.—Roentgenotherapy is regarded by Pfahler as the method of choice for the control of hemorrhage in patients approaching the menopause, in whom carcinoma can be eliminated. It is not the method of choice in patients under 40 years of age. It can be recommended in all cases of any age in which operation is contra-indicated. For the differential diagnosis, in order to determine the indications for this treatment, special skill in gynecology is required; and for the proper administration of the rays, special training in Roentgen technic is necessary. It is possible for a gynecologist to become a roentgenologist. It is also possible for a roentgenologist to become a gynecologist, but it is very unlikely that either one will master both. Therefore, Pfahler believes that each patient should be examined by a gynecologist and treated by a roentgenologist.

American Journal of Public Health, New York

May, III, No. 5, pp. 413-512

15 Necessity for Uniformity in National, State and Municipal Vital Statistics Reports. C. I. Wilber, Washington, D. C.
16 Relation of Morbidity Reports to Public Health Administration. J. W. Trask, Washington, D. C.
17 Misleading Mortality Statistics on Tuberculosis. P. P. Jacobs, New York.
18 Two Ways by Which Vital Statistics Can Be Made Useful to Health Office. G. W. Atherholt, Philadelphia.
19 Practical Value of Vital Statistics in South. W. S. Rankin, Raleigh, N. C.
20 Identification Records for Unknown Dead. T. H. D. Griffitts, Springfield, Ill.
21 Statement of Duration of Disease on Death Certificates as Determining Factor in Classifying Causes of Death. G. H. Van Buren, Washington, D. C.
22 Some Newer Problems and Some Newer Phases of Antituberculosis Warfare in United States. S. A. Knopf, New York.
23 Experiment in Schoolroom Ventilation. F. Bass, Washington, D. C.
24 Outbreak of Typhoid in Belleville, Ill. H. N. Parker, Champaign, Ill.
25 Methods for Eradication of Uncinariasis. J. A. Ferrell, Raleigh, N. C.

Annals of Surgery, Philadelphia

May, LVII, No. 5, pp. 593-783

26 *Arthroplasty. J. B. Murphy, Chicago.
27 Identity of Cause of Aseptic Wound Fever and So-Called Postoperative Hyperthyroidism and Their Prevention. G. W. Crile, Cleveland.

28 *Surgical Significance of Accessory Pancreas. T. Carwardine and A. R. Short, Bristol, England.
29 Cysts of Spleen. R. H. Fowler, Brooklyn.
30 *Pathologic Data Obtained from Ulcers Excised from Anterior Wall of Duodenum. W. J. Mayo, Rochester, Minn.
31 *Fatal Hemorrhage from Erosion of Gastroduodenal Artery by Duodenal Ulcers. J. E. Thompson.
32 *Acute Perforated Duodenal and Gastric Ulcers. J. B. Deaver, Philadelphia.
33 Resection of One-Third of Colon for Irreducible Intussusception in Infant Five Days Old. C. N. Dowd, New York.
34 Complications Following Surgical Operations. E. H. Beckman, Rochester, Minn.
35 Abolishing Pain After Operations with Nerve Block à Distance. L. Watson, Oklahoma City, Okla.

26. **Arthroplasty.**—Murphy discusses arthroplasty from the basis of his personal observations and experiences, describing in detail his technic for operation and after treatment. The subject is covered fully. He reports sixteen cases illustrating arthroplastics on all joints except the shoulder. The paper is well illustrated but its length and detail prohibit making an abstract for these columns which would do justice to the article. Therefore the reader is referred to the original. His conclusions are: The great majority of cases of ankylosis, the result of a metastatic arthritis ("inflammatory rheumatism" which is initiated with a chill) are avoidable. He is absolutely convinced that the contortion deformities following metastatic arthritis are avoidable. The acute arthritides, and especially those that have an initial chill, are surgical lesions from the very first day. The initial chill is a warning that ankylosis probably will occur, and therefore the limb must be kept in a good position from the very beginning and the interarticular pressure produced by involuntary muscle contraction must be overcome. This is best accomplished by some type of Buck's extension. This not only prevents the deformity, but greatly alleviates the suffering of the patient, and usually, we believe, prevents the occurrence of the ankylosis. The plaster cast in acute infections always favors ankylosis and should never be used. In tuberculosis it favors repair and therefore lessens the likelihood of ankylosis. Extension of sufficient weight to overcome the muscular contraction is the ideal means of preventing deformity and avoiding ankylosis. His final conclusion with regard to arthroplasty is that where the technic of the operation is carried out properly, in a primarily sterile field, the results far exceed orinal expectations. They can be secured uniformly, and when they are not secured the failure must be charged to some defect in technic or in the subsequent management of the case.

28. **The Accessory Pancreas.**—According to Carwardine and Short thirty-nine cases of accessory pancreas were on record in 1908. It was first described by Klob in 1859. The accessory pancreas is a small, rounded nodule which may be as large as a filbert, situated somewhere in the wall of the alimentary canal, though there is one case on record in which it was found to lie close to the umbilicus in the abdominal wall. More commonly, it is situated: (1) in the wall of the stomach, either near the pylorus, or the greater or lesser curvature; (2) in the wall of the duodenum, but detached from the true pancreas; (3) in the first eight inches of the jejunum; this is the commonest location, and both of the authors' cases fall into this class; (4) in the lower jejunum or ileum. In several instances it has been found near the ileocecal valve. In some cases it has been covered by a normal mucous membrane and serous coat; in others no villi have been present over it but it has bulged into the lumen of the bowel, as in the case figured. Histologically, it shows typical pancreatic structure and well-defined ducts. The accessory pancreas may give trouble in four ways: 1. It may produce mechanical alterations in the walls of the alimentary canal. 2. The accessory pancreas is liable to acute pancreatitis. 3. Accessory pancreas may develop chronic interstitial pancreatitis. 4. Accessory pancreas may complicate the diagnosis of the cause of abdominal symptoms.

30. **Ulcer of Anterior Wall of Duodenum.**—So far as Mayo has been able to observe, ulcers of the posterior wall of the duodenum present the same characteristics as those of the stomach; that is, a clean-cut, definitely punched-out area, attached closely to the pancreas and usually completely perforating the duodenum. They are protected posteriorly by a callus which forms the base of the ulcer. In such cases, however, an anterior contact ulcer will usually be found just opposite the lesion on the posterior wall. In four instances Mayo excised an ulcer on the posterior wall, suturing the defect from the mucous side. In each case the base of the ulcer was closely attached or fused with the pancreas and, since it was impossible to get at the posterior wall to apply an outer row of sutures, Mayo contented himself in two cases with a protecting suture at the upper and lower peritoneal angles. In one case a complete division was made of the duodenum after excision of the ulcer with direct union of the end of the duodenum to the end of the stomach. In the fourth case devitalizing mattress sutures were applied from the mucous side in such manner as to cut out the ulcer. The excision of these four posterior ulcers of the duodenum proved to be so difficult as contrasted with gastro-enterostomy that Mayo is not encouraged to continue the practice, although the patients recovered and remain well. He believes, therefore, that the excision of duodenal ulcers should be limited to those occurring on the anterior wall.

31. **Erosion of Gastroduodenal Artery.**—Two fatal cases of bleeding from duodenal ulcers in spite of the operation of gastro-enterostomy are cited by Thompson. In both cases the ulcer was situated on the posterior surface of the first portion of the duodenum, and in both the hemorrhage, which proved fatal, came on at a time when it looked as if the patients would recover from the operation. The first patient died thirty-four hours after the operation with all the symptoms of concealed hemorrhage, but as no autopsy was allowed it could be only surmised, from the position of the ulcer, that the gastroduodenal vessel was eroded.

32. **Perforated Duodenal and Gastric Ulcers.**—The criterion of value of any method of treatment, says Deaver, is the result obtained by its application. The combined statistics of many leaders in upper abdominal surgery show not only a smaller primary mortality with the complete operation in acute perforation of gastric and duodenal ulcers, but a smaller postoperative morbidity. Deaver has lost only one patient, a late case, with simple closure of the perforation. Seventeen patients with primary, and one patient with secondary gastrojejunostomy recovered and were discharged from the hospital in good health. This result, he believes, is sufficient argument and justification for his faith in primary gastrojejunostomy. Its application leads to a speedy, safe and complete cure with the least jeopardy to future health.

Archives of Internal Medicine, Chicago

April, XI, No. 4. pp. 365-467

36 Vasomotor Reflexes Elicited by Heat and Cold from Regions Devoid of Temperature Sensibility (an Unusual Case of Post-Typhoidal Neuritis). G. N. Stewart and W. B. Laffer, Cleveland.
37 Vasomotor Reflexes Elcited by Heat and Cold from Areas Deprived of Temperature Sensibility by a Traumatic Lesion. G. N. Stewart and O. C. Walker, Cleveland.
38 Method for Quantitative Determination of Pepsin by Using Colloidal Suspension of Egg Albumin. C. H. Neilson and E. Bonnot, St. Louis.
39 *Heart Size and Heart Function in Children Showing Orthostatic Albuminuria: Orthodiagraphic Study. M. H. Bass and H. Wessler, New York.
40 *Effect of Strychnin and Digitalis on Man. D. Marvin, Burlington, Vt.
41 Human Botryomycosis of Liver. E. L. Opie, St. Louis.
42 *Case of Foreign Body (Toothpick) in Heart. C. H. Bailey, New York.
43 *Respiration and Circulation in Epilepsy. L. J. Pollock, Galesburg, and W. L. Treadway, Jacksonville.
44 *Modification of Russo's Urinary Typhoid Test, with Report of Its Use in One Thousand Cases, and a Complete Bibliography. L. Neuman and E. B. Behrend, Washington, D. C.

39. **Heart Size and Heart Function in Children.**—In a series of cases of orthostatic albuminuria selected at random, Bass and Wessler say it will be found that a considerable number present evidence of relative cardiovascular insufficiency. These

symptoms, in the great majority of cases, are not associated with any hypertrophy or dilatation of the heart. On the contrary, the heart is in many cases smaller than normal; nor does it show any gross evidence of weakness as dilatation after exercise, an explanation suggested by previous investigators. Although the hearts do not dilate after exercise, a considerable number of them fail to become smaller under these conditions. This failure to contract may perhaps be looked on as a restriction of the field of cardiac response. The condition known as the juvenile heart or "*Wachstums-hypertrophie*" occurred three times in the authors' cases and can be distinctly recognized. The conception of pulse or heart instability must be restricted to a tendency of the pulse to become smaller and impalpable after exercise, a condition which they have found very common. In 30 per cent. of the cases they have found hearts of the drop type, especially associated with other stigmata of constitutional maldevelopment.

40. **Effect of Strychnin and Digitalis on Man.**—No effect on the rate of respiration was noted by Marvin in his strychnin experiments except from 1/20 grain, which produced an average increase of one per minute. This effect was not constant, a drop occurred occasionally, which was due largely to individual fluctuations occurring at the same time and without apparent cause. A slowing of the pulse-rate from all doses was noted, also a marked increase in blood-pressure from 1/30 to 1/20 grain. Practically no effect from 1/40 grain. Digitalis had no effect on the rate of respiration, but produced a slowing in the pulse-rate of eight beats per minute and a marked increase in blood-pressure which reached its maximum in five hours, gradually returning to normal after fifty hours. A persistence of action for fifty hours from a single dose of 14 minims of a standard tincture of digitalis was an interesting observation.

42. **Foreign Body in Heart.**—The foreign body in Bailey's case was proved to have reached the heart by way of the blood-stream, its point of entrance into the latter from the intestine having been demonstrated. The route traveled by the toothpick was a short one. Necropsy was performed six hours post mortem. Protruding 1.5 cm. from the posterior tip of the right auricle was the end of an ordinary wooden toothpick which measured 6.8 cm. in length. The other end could be felt within the auricle, pressing against its anterior wall at the right auricular appendage. Over this end the wall was thinned, white and covered with fibrin over a small area about 3 mm. in diameter. The toothpick was held in place within the auricle by a soft "chicken fat" clot. At the upper part of the pericardium posteriorly there was an area, 1 cm. in diameter, which was abraded, but not pierced, by contact with the end of the toothpick. On the posterior wall of the duodenum, 14 cm. beyond the pylorus, at the lower part of the descending portion where it lay directly over the inferior vena cava, was a small ulcerated area, about 5 mm. in diameter. Extending backward and upward from the base of this ulceration was a sinus, 1.5 cm. in length, which easily admitted a probe 2 mm. in diameter, leading directly into the inferior vena cava. The intestine was otherwise normal. In the anterior wall of the inferior vena cava, 8 cm. below the entrance of the hepatic vein was the opening of the sinus from the duodenum previously described. Surrounding this opening the wall over an area 5.5 cm. lengthwise of the vessel and 2.5 cm. transversely, showed a rough, eroded surface covered with a small amount of loose fibrin of a greenish color, suggesting bile staining. A small fibrin clot adherent to the edge of the sinus had evidently plugged it before death.

43. **Respiration and Circulation in Epilepsy.**—The authors claim that there are present in many cases of epilepsy rhythmic variations of blood-pressure other than those due to respiratory movements. The sequence of events relative to a convulsion is as follows: A preliminary rise in blood-pressure followed in series by a sudden drop of blood-pressure, a period of apnea, and then the convulsion. The blood-pressure was relatively low during convulsions of petit mal type and during some of the corresponding periods of the fits of the grand mal type. The pulse was rapid during the convulsions. A study of the changes in the respiratory and circulatory systems in some of the cases of epilepsy suggests that the site of discharge is in the medulla and pons (the "lowest level of fits" of Hughlings Jackson). Likewise it points to the medulla as participating in the discharge in all cases of epilepsy whether this discharge originates there or not.

44. **Modification of Russo's Urinary Typhoid Test.**—The modified technic, as used by the authors, is as follows: Make an aqueous solution of methylene-blue of such concentration that when thoroughly mixed, it will just be translucent. Using the ordinary test-tube, use a sufficient quantity of the methylene-blue solution to fill the test-tube just above the bowl. Then fill the test-tube with urine, and after thoroughly mixing, examine against a good daylight and note the color reaction. Emerald or mint green indicates a positive reaction, while any tinge of blue renders it negative. The constant positive reaction in typhoid and its rare appearance in other conditions, the authors believe, give this test marked corroborative value. A negative reaction is very good evidence that the condition is not typhoid. Its prognostic value is to be doubted, but its continued appearance in severe cases, and reappearance in relapses is important. Its simplicity strongly recommends it, with certain limitations, to wit, that a differentiation of the true greens from the bluish-greens is a matter of practice and experience. Its very early appearance will aid in isolating a suspected patient at once, and general prophylactic measures will be instituted.

Boston Medical and Surgical Journal

May 22, CLXVIII, No. 21, pp. 749-784

45 Treatment of Laryngeal Stenosis Following Diphtheria. D. L. Richardson, Providence, R. I.
46 Treatment of Chronic Stenosis of Larynx and Trachea. H. L. Lynah, New York.
47 Dietetic Treatment of Constipation. L. H. Newburgh, Boston.
48 *Favorable Influence of Periods of Protein Free Diet in Chronic Nephritis. H. W. Goodall, Boston.
49 Jackson Membrane. H. W. Baker, Boston.

48. **Protein-Free Diet in Chronic Nephritis.**—It is held by Goodall that a protein-free diet for a continuous period of from five to ten days can be maintained without harm to the individual. With such a restriction the accumulated end-products of protein metabolism in the blood are promptly eliminated, the nitrogen content of the blood falls to normal and the kidneys and heart are given an opportunity to rest. Such a restriction may be followed by a low-protein diet for a considerable period of time, even in advanced cases, without a return of the disagreeable symptoms.

The following procedure, which was followed in the cases reported by Goodall, is advised as the dietary treatment of chronic diseases in which there is a retention of nitrogenous end-products. A protein-free diet should be given for a period of from five to ten days, according to the severity of the disease. At the end of this period amount of protein not exceeding 60 gm. daily should be added and maintained until (a) the resulting improvement of the patient will permit of a further protein increase (up to 90 gm. or 100 gm. as a maximum) or until, (b) the signs and symptoms indicate that there is a reaccumulation of waste products. In the latter event the protein free diet should be repeated. This same procedure may be employed at intervals of not less than six or eight weeks, or a single protein-free diet may be given as often as once in seven days, without injurious effects. As a caution it is to be advised that the diet be given under supervision, or controlled by the urinary nitrogen.

Colorado Medicine, Denver

May, X, No. 5, pp. 147-174

50 Intestinal Diverticulitis. D. P. Mayhew, Colorado Springs.
51 Desirability of Abdominal Exploration. L. Freeman, Denver.
52 Abdominal Adhesions and Kinks. F. Finney, La Junta.
53 Tumors of Bone. S. B. Childs, Denver.
54 Glaucoma: Diagnosis and Present Methods of Treatment. W. H. Crisp, Denver.
55 *Prevention of Typhoid. L. P. Barbour, Rocky Ford.

55. **Prevention of Typhoid.**—The following are the recommendations made by Barbour: First, compulsory sewer connection. Nothing you can do will improve health conditions so much as this one measure. Sewers should be extended to the uttermost limits of the town, and the town should be extended to take in all the suburbs, including the fair grounds. Second, where there are no sewers, and until sewer connection can be made, all privies should be made fly-tight. The room should be screened, but especially should it be impossible for flies to enter the vault. Third, privy vaults, though fly-tight, are still a menace to the cisterns of the neighborhood. Built as most cisterns are the walls often crack, but oftener become worn so thin as to permit seepage of soil water. It is this soil water that contaminates our cisterns. Therefore, the water from all cisterns should be tested each spring and as frequently thereafter as the health officer or householder may think necessary. Either this or close all cisterns. Fourth, careful protection of the city reservoir. Fifth, regulation of the selling of milk in the city. As a condition for receiving a license to sell, each seller should be rigidly required to report promptly all cases of sickness in his family, among his employees or the families of his employees. Sixth, strictly enforced measures for preventing the breeding of flies. To this end there should be compulsory cleaning of every lot, corral, stable yard, stable and barn every week from April to October, the refuse to be burned or hauled to a suitable place beyond the city limits. Seventh, proper quarantine of each typhoid patient. This implies thorough sterilization of the discharges of the patient, of all clothing worn by him, and of all eating utensils used. None but necessary nurses should touch the patient or handle any of the aforesaid clothing, etc., until after disinfection. Eighth and finally, antityphoid vaccination.

These measures, Barbour states, will prevent the spread of typhoid within the town. They will not prevent its introduction from without. No community can be absolutely safe from typhoid until the larger community surrounding it is free. There is now everywhere more typhoid in the rural districts, proportionately, than in the urban. This calls for action by county authorities. Supervision and control of sanitary conditions of farms is needed. The county authorities should especially watch all the construction camps on railroads, reservoirs and ditches. These have been the starting point of more than one epidemic. The sanitation of fair grounds, athletic parks, etc., should, where these are outside the city limits, be guarded by the county health officer. The best work could be done if there were cooperation of town and county authorities in a statewide campaign under the supervision of the State Board of Health. By such a campaign the disease could be driven from any state in two years' time; and the same measures that would eliminate typhoid would lessen other diseases.

Georgia Medical Association Journal, Augusta

May, III, No. 1, pp. 1-36

56 What General Practitioner of Medicine Can Do for Public Health. C. P. Wertenbaker, Norfolk, Va.
57 Health Conditions as They Exist in Most South Georgia Municipalities. A. D. Little, Thomasville.
58 County Boards of Health. R. V. Nottingham, Macon.
59 Need of Full Time County Health Officers. A. G. Fort, Atlanta.
60 Sanitary Disposal of Municipal Waste. R. L. Russel.

Illinois Medical Journal, Springfield

May, XXIII, No. 5, pp. 471-594

61 *Rationale of Hydrotherapy. F. P. Norbury, Springfield.
62 Sterilization of Insane, Criminal and Delinquent. H. D. Singer, Kankakee.
63 When Is Operative Treatment Indicated in Chronic Dyspepsia? W. H. Wathen, Louisville, Ky.
64 Practical Studies in Tuberculosis. C. L. Wheaton, Chicago.
65 Injuries to Lungs and Pleura; Report of Case. P. Z. McDonald, Chicago.
66 Technic of Surgery of Gall-Bladder and Bile Ducts. F. C. Eggert, Chicago.
67 Rationale of Salvarsan Treatment of Syphilis. E. A. Fischkin, Chicago.
68 Cardiac Arhythmia. E. K. Kerr, Chicago.
69 Road to Rational Medicine. E. P. Lyon, St. Louis.
70 Medical Men of To-Day. G. A. Zeller, Peoria.

61. **Rationale of Hydrotherapy in Mental Disease.**—Hydrotherapy, according to Norbury, is the most valuable and most generally available means of practice now in vogue. The effects noticed are sedative, tonic and eliminative. The sedative effects are secured through the application of the warm bath, the pack, the continuous or prolonged bath. Insomnia, restlessness, excitement, manic phases, etc., are the indications for the use of sedative treatment. Tonic effects are secured through the cold pack for fifteen minutes followed by the douche, massage, etc. These measures are indicated in depressed states, in dementia praecox cases, certain phases of paresis. Elimination is obtained through the douche, etc. These baths are taken daily and for a sufficient length of time to get results. An exact technical consideration of indications is necessary first as to form of bath, the manner of giving and clinical detail to be observed in each case. There are many physicians, Norbury continues, including some hospital managing officers even in Illinois, who do not appreciate the value of hydrotherapy, and who look on the apparatus and routine of practice as "fuss and feathers"—the apparatus as an "expensive toy"—and all because of ignorance, the lack of definite information and a tendency to cling to old idols. The treatment of mental disease has, through hydrotherapy, been revolutionized, the burdens of responsibility in treatment lessened by providing more precise, more scientific, more reliable methods of securing the three great indications in such treatment, viz., sedative, tonic and eliminative results without the undesirable results not infrequent in the train of certain drugs which are used to secure sedation, etc.

Illinois proposes to train her own operatives in hydrotherapy. She has decided to have a training station at Kankakee where a graduate in physical therapeutics will teach the practical technic and where physicians familiar with the principles and practice of hydrotherapy will conduct the class work. Norbury states most emphatically that general hospitals, private sanatoriums and even physicians' offices should have at hand the facilities to meet the indications for hydrotherapeutics as we now see them to-day. Every community of at least ten thousand inhabitants should have a complete equipment, which could be conducted as a private hydriatic institute, to which patients could be sent for treatment. Water companies could cooperate to make such an institute a credit not only to the community, but to the company and all who would cooperate in making water as a therapeutic agent available and serviceable to that community.

Iowa State Medical Society Journal, Clinton

May, II, No. 11, pp. 769-848

71 Medical Education at Iowa State University. D. S. Fairchild, Clinton.
72 Medical Department, Iowa State University. W. D. Middleton, Davenport.
73 University of Iowa, Medical Department, Since 1876. J. R. Guthrie, Dubuque.
74 Future of College of Medicine. J. G. Bowman, Iowa City.
75 What State Should Expect of Its Medical College. J. H. Trewin, Iowa City.
76 Pathogenicity of Waldeyer's Ring Relative to Aural Disease. P. R. Wood, Marshalltown.
77 Accessory Nasal Cavities. W. W. Pearson, Des Moines.
78 Pharyngeal Tonsils. B. D. La Force, Ottumwa.
79 Non-Suppurative Catarrhal Otitis Media. F. G. Murphy, Mason City.
80 Cases of Pernicious Anemia. W. L. Bierring, Des Moines.
81 Differential Diagnosis in Abdominal Trauma. O. J. Fay, Des Moines.
82 Thymus. J. F. Herrick, Chicago.

Journal-Lancet, Minneapolis

May 15, XXXIII, No. 10, pp. 275-300

83 Semeiotic Significance of Pathologic Findings in Infant Feces. C. P. Robbins, Winona, Minn.
84 Tumors of Testicle and Epididymis. H. T. Kenney, Pierre, S. Dak.
85 *Eclampsia: Its Cause and Treatment. W. Reid, Deerwood, Minn.
86 Vaginal Cesarean Section in Certain Cases of Eclampsia, Placenta Praevia, Pernicious Vomiting and in Hemorrhage Due to Premature Separation of Placenta. H. C. Cooney, Princeton, Minn.

85. Abstracted in The Journal, Aug. 31, 1912, p. 745.

Kentucky Medical Journal, Bowling Green

May 15, XI, No. 10, pp. 393-426

87 Fifteen Hundred Cases of Tuberculosis. D. S. Wilson, Louisville.
88 Suppurative Conditions of Upper Abdomen. B. F. Zimmermann, Louisville.
89 Renal and Ureteral Calculi. I. Abell, Louisville.

Medical Record, New York

May 24, LXXXIII, No. 21, pp. 921-966

90 *Abortive Pulmonary Tuberculosis. M. Fishberg, New York.
91 Therapeutics of Intestinal Auto-Intoxication. W. H. King, New York.
92 Blunders Made by Nature. A. Maverick, San Antonio, Texas.
93 Compulsory Detention of Homeless Tuberculous. E. G. Rankin, New York.
94 Tuberculides, W. P. Cunningham, New York.
95 Prevention of Adenoids. W. Brady, Elmira, N. Y.
96 Drop Method of Giving Ether with Closed Inhaler. C. P. Bull, Cananea, Mexico.

90. **Therapeutics of Intestinal Auto-Intoxication.**—King describes a form of local treatment for the eradication of putrefactive conditions when located within the large intestine, an eradication which he has found to be more or less permanent in its action, according to the thoroughness of the treatment, and the subsequent care of the patient's diet and hygiene. Starting with the premises that the colon bacilli feed on oxygen, that the putrefactive bacilli are destroyed by the same agent, and that the former must utilize all the available oxygen in the intestine before the latter can materially manifest themselves, King thoroughly oxidizes not only the surface of the lining of the large intestine, but also carries this oxidation within the glandular cells and tissues of the membranes. He first gives a high enema to empty the bowel of fecal matter, so that the antiseptic afterward employed will not be utilized solely in destroying this dead matter, as well as to clear the membrane that the action may be unimpeded on its surface, and thus enable a better osmosis or anaphoresis to take place. A colon rectal tube is employed. The tube should be well lubricated so that it will not impinge on the sphincter, as its easy passage through this muscle is necessary in determining whether it is progressing straight up the bowel.

The next point is the slow and careful introduction of the water. The bag is placed but little higher than the body of the patient. The water should flow very slowly to prevent a sudden damming up at the end of the tube, but be allowed to work its way back beyond the fecal mass, and at the same time to soften and percolate through it. For this preliminary injection King uses only plain water. If possible the patient should rest for a few minutes before going to the closet, where the bowl is thoroughly emptied. The patient is again placed in position and the tube is reintroduced. With this second injection an electric current is employed. A large electrode, which thoroughly covers the abdomen, is placed directly over the line of the transverse colon. To this is attached the positive pole of a continuous current. The other rheophore is attached to an instrument by means of which the current is made to traverse the fluid injected, thus making it the negative pole.

King believes that there is undoubtedly a certain amount of chlorin also set free by the passage of the electric current through the normal salt solution. As chlorin is strongly anaphoretic in its electrochemical affinity, it not only acts on the surface of the membrane of the intestine, but also carries it within the glands and follicles of the membrane itself, and it is here that its action is most needed. Anaerobic bacilli cannot thrive in the presence of oxygen, and the formation of the different groups of the anaerobic bacilli is because the colon bacilli have first consumed all the available oxygen. The oxygen thus set free in this treatment not only destroys the entire group of anaerobic bacilli, including Welch's bacillus which causes the putrefaction, but it also destroys the medium on which it thrives, and at the same time furnishes food for the normal bacilli, thereby building up a strong family of the normal group. In properly selected cases, King says he has never seen such positive results as this treatment produces. The number of treatments required varies as to the condition of the patient. In most cases from eight to twenty treatments given daily will suffice. The indican and sulpho-ethers gradually disappear from the urine. The skatol disappears from the feces, the indol is decreased, and the gas volume is reduced to from 12 to 18 per cent. The clinical results are manifest by the disappearance of the insomnia and other conditions depending on the auto-intoxication.

Missouri State Medical Association Journal, St. Louis

May, IX, No. 11, pp. 357-384

97 Spinal Anesthesia in Gynecology. G. Gellhorn, St. Louis.
98 Local Anesthesia in Minor Gynecology. S. J. Wolfermann, St. Louis.
99 Making of "Specialists," with Particular Reference to Oculists (Doctors) and Optometrists (Opticians). J. S. Weaver, Kansas City.
100 Julius Pagel and Pagel Collection of Books on History of Medicine in Washington University Medical School. G. Dock, St. Louis.
101 Need for State Care of Crippled Children and Advantages of System. D. C. McMurtrie, New York.
102 *Tincture of Iodin in Treatment of Fresh Wounds. T. G. Orr, New York.
103 History of Cass County Medical Society. J. S. Triplett, Harrisonville.
104 Ophthalmia Electrica; Report of Case. W. E. Shahan, St. Louis.

102. **Tincture of Iodin in Fresh Wounds.**—For eighteen months, while on the house staff at the New York Hospital, Orr has used the U. S. P. tincture of iodin in the treatment of fresh wounds, in the dispensary, on the ambulance and in the hospital. During this time he has treated nearly 1,000 patients with incised, lacerated and contused wounds, dogbite, compound fractures, traumatic amputations, etc., with excellent results. He describes the method as follows: The more simple the technic used the better. If the area about the wound needs shaving it should be shaved dry. Any loose tags of tissue or skin or foreign body should be removed with sterile instruments and not washed out. No water or watery solution should touch the wound. The tincture of iodin is first painted about the wound and allowed to dry for a short time, giving opportunity for penetration. Then with another bit of sterile cotton on a toothpick the wound itself is painted thoroughly. Dannreuther's method of injecting the deeper recesses of a wound with a medicine dropper is a good one but should not be depended on entirely in cases of puncture wound where there is a liability of tetanus infection. A sterile compress is then held firmly over the wound, if it is small, until hemorrhage is stopped, and a sufficient number of sutures applied to approximate the edges of the wound when indicated. In the large lacerated wounds the iodin may be poured into the wound after painting a free area about it. Drainage should, of course, be used when indicated, especially in the badly contused lacerated wounds where there is apt to be much oozing and the resistance of the tissues is much below par.

Northwest Medicine, Seattle

May, V, No. 5, pp. 119-148

105 *Pathology and Treatment of Hemangioma Cavernosum. M. M. Patton, Spokane, Wash.
106 Apepsia: Clinical and Laboratory Study. A. P. Lensman, Seattle, Wash.
107 Psychotherapy in Pulmonary Tuberculosis. J. L. Pomeroy, Monrovia, Cal.
108 Investigation of Friedmann Tuberculosis Cure. R. W. Matson, Portland, Ore.
109 Alcoholism; Syphilis; Tuberculosis. J. E. Crichton, Seattle, Wash.
110 Pseudovariola. G. U. Emery, Preston, Idaho.
111 Ovarian Cyst with Twisted Pedicle. O. B. Wright, Portland, Ore.

105. **Hemangioma Cavernosum.**—Hemangioma, according to Patton, occurrs more frequently in females than in males. They are often multiple and a predisposition of the vessels to dilation and hyperplasia is undoubtedly present. In Patton's five cases, at least, he would say that they were congenital and present, though not noticed at birth, and that a simple telangiectatic stage probably preceded the cavernoma formation. Hemangiomata cavernosa are tumors distinct and sepa-

rate from the skin and have a blood supply of their own. The cavernous angiomata present microscopically: (a) Dilated and tortuous blood spaces with a certain amount of regularity about arrangement. (b) Endothelial lining which may be thickened and present three or four layers. (c) Interstitial substance composed of parallel fibers of connective tissue which form framework of tumor. These tumors are usually easily removed if you keep well out into the healthy tissue. Removal of angiomas about the inner canthus of the eye and forehead is particularly dangerous on account of septic embolus and thrombosis of cavernous sinus.

Philippine Journal of Science, Manila

December, VII No. 6, pp. 475-536

112 Rôle of Stomoxys Calcitrans in Transmission of Trypanosoma Evansi. M. B. Mitzmain, Manila.
113 Susceptibility of Cockroaches to Plague Bacilli Inoculated into Body Cavity. M. A. Barber, Manila.
114 Muscular Changes Brought About by Intermuscular Injection of Calves with Virus of Contagious Pleuropneumonia. W. H. Boynton, Manila.

Southern Medical Journal, Nashville, Tenn.

May, VI, No 5, pp. 289-354

115 Publicity as Factor in Securing and Enforcing Ordinances Providing for Control of Production and Sale of Milk. V. H. Bassett, Savannah, Ga.
116 Massage. C. Pope, Louisville, Ky.
117 Roentgen Diagnosis of Intrathoracic Lesions. A. L. Gray, Richmond, Va.
118 Phthisiogenesis. E. C. Thrash, Atlanta, Ga.
119 Early Recognition of Tuberculosis with *Special Reference to* Its Confusion with Malaria. W. R. Kirk, Hendersonville, N. C.
120 *Clinical Value of Tuberculins in Diagnosis and Treatment of Tuberculosis. W. J. Durel, New Orleans.
121 Individualizing Tuberculous Patient. L. B. Morse, Hendersonville, N. C.
122 *Relation of *Gas Embolism to Production* of Artificial Pneumothorax. S. T. Harris, Highlands, N. C.
123 *Status of Climate in Phthisiotherapy. T. Frazer, Asheville, N. C.
124 Few Surgical Complications in Abdomen During Typhoid. C. M. Remsen, Atlanta, Ga.
125 *Surgical Importance of Breast. E. D. Martin, New Orleans.
126 Grape Seeds in Pelvic Abscess. C. H. Cargile, Bentonville, Ark.
127 Eclampsia and Its Treatment. A. Y. Linville, Winston-Salem, N. C.
128 Cesarean Section. J. M. Wilson, Mobile, Ala.
129 *Intranasal Deformities with Their Attendant Sequelae.* C. B. Wylie, Chattanooga, Tenn.

120 and 125. Abstracted in The Journal, Dec. 14, 1912, p. 2181.

122. Abstracted in The Journal, Dev. 7, 1912, p. 2090.

123. **Climate in Phthisiotherapy.**—Climate according to Frazer is of value in the treatment of tuberculosis, although it takes rank after the hygienic-dietetic regimen. Generally speaking, he says that a stimulating climate is desirable, and some degree of elevation beneficial in the average case. People react differently to climate, one being stimulated, another depressed, by similar climatic conditions. Atmospheric and meteorologic conditions alone do not constitute climate, and climatotheraphy must embrace the not less important factors of food, accommodations, hygiene and environment. The financial state, the mental attitude of the patient, and the stage of the disease must all be taken into account before a change of climate is advised. If the patient, in order to obtain the advantages of climate, is obliged to suffer for want of proper food, care and rest, treatment at home will be more satisfactory; if he is able to afford at a resort the comforts and the supervision which are so essential, then the added factor of climate cannot but prove of distinct value.

Washington Medical Annals, Washington, D. C.

May, XII, No. 3. pp. 161-200

130 Contact Points Between Ophthalmology and General Medicine. H. Woods, Baltimore.
131 Hermaphroditism; Specimens. D. S. Lamb, Washington, D. C.
132 Use of Quinin and Urea *Hydrochlorid as Local Anesthetic* in Anorectal Surgery. L. Eliot, Washington, D. C.
133 Case of Ureteral Abscess. W. A. Jack, Washington, D. C.
134 Mentality of Alcoholics. D. P. Hickling, Washington, D. C.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 10, I, No. 2732, pp. 977-1036

1 Intussusception. H. S. Souttar.
2 *Transverse Colostomy as Operation of Election. L. McGavin.
3 *Urachal Fistula: Report of Case.* J. E. Mitchell.
4 Enchondroma of Manubrium Sterni Successfully Removed by Operation. W. G. Richardson.
5 *Case of Abdominal Aneurysm *Operated* on by Means of Colt's Apparatus. *J. R. Collins* and C. Braine-Hartnell.
6 *Cheilotomy for* Crippling Traumatic Arthritis of Hip-Joint. W. I. de C. Wheeler.
7 *Interneuronic Synapse in Disease.* B. H. Shaw.

2. **Transverse Colostomy.**—In twenty-six cases, colostomy was done by McGalvin in twenty cases by the transverse and six by the iliac method. Of the former three *were done for* non-malignant and seventeen for malignant conditions. Of the *non-malignant one died of strangulation* at three months, and one of phthisis at two years after operation, the third is alive and well to-day. Of the malignant cases five patients are alive to-day, one at three years, one at two years, two at eighteen *months* and one at a year from the time of operation; and in all of these this method of colostomy has fully justified the opinion McGavin has formed of it, as it has also done in all cases in which the *patients have lived sufficiently long to allow* of an honest judgment being formed.

5. **Abdominal Aneurysm.**—The aneurysm in this case extended from the right renal artery to the bifurcation of the aorta, and lay wholly to the right of the middle line. The external measurements of the aneurysm were 4½ inches in length by 3 inches in breadth. There was an oval opening from the aorta into the *aneurysm,* 2 *inches* by 1 inch, on its right wall, filled with firm clot. There was a further opening *on the left and lower extremity, directed down outside the* bifurcation of the left common iliac, encircling three quarters of its circumference. It was noted that, in spite of the fact that the man suffered from intense pain, there was no erosion of the vertebrae, and it is suggested *that the pain* was caused by the dissecting aneurysm along the left common iliac artery. The stomach was very dilated, its lower border reaching to the umbilicus. The thoracic viscera were normal.

British Journal of Children's Diseases, London

May, X, No. 113, pp. 193-240

8 *Diagnosis of Acute Abdominal Conditions in Children. E Cautley.
9 *Mitral Dwarfism. F. P. Weber.
10 Summer Heat and Summer Diarrhea. H. C. Cameron
11 *Diphtheria of Stomach and Diphtherial Onychia. F. E Tylecote.

8. Also published *in the Medical Press and Circular,* March 5, 1913.

9. **Mitral Dwarfism.**—Weber's patient was a girl, aged 15 years, but her size was that of a child of 10 years. Ordinary *examination and roentgenoscopy* showed that the heart was considerably enlarged to the left; the apex-beat was in the sixth left intercostal space in *the anterior* axillary line. A presystolic and diastolic thrill could be felt, and a loud double mitral murmur could be heard at the apex, showing that there was mitral obstruction, accompanied by mitral incompetence, the mitral incompetence doubtless accounting for the hypertrophy of the left ventricle. There was a little crepitation at the base of the left lung behind. *Roentgenoscopy* of the lungs with the fluorescent screen showed nothing special. Nothing abnormal could be felt by abdominal palpation. The teeth were fairly well formed. The nose was somewhat "saddle-shaped," but there was a history of past injury by a fall. The thyroid appeared to be rather small. There was no pubic or axillary hair. Menstruation had not yet commenced. The *urine* was free from albumin and sugar. The pulse (after examination) was 100 to the minute, of moderate pressure. Wasser*mann, negative;* von Pirquet, negative.

There was no history of past rheumatism and no evidence of syphilis or tuberculosis. Weber had hardly a doubt that the cardiac disease was of rheumatic origin. The dwarfism in this case he regards as a sign that the mitral disease commenced at a relatively early period of extra-uterine life, long before the period of maximum normal development. Of the mitral obstruction and the mitral incompetence he considered the former to be the more important factor in the etiology of the dwarfism. This dwarfism he thinks may be best explained as the expression of a conservative adaptation or conservative hypoplasia of the whole body—Nature's attempt to limit the growth of the patient in accordance with the limited arterial blood-supply. Such a conservative hypoplasia is to be contrasted with the better-known conservative vital process known as compensatory hyperplasia, which is illustrated in this case by the hypertrophic enlargement of the left ventricle to make up for the regurgitation of blood through the leaky mitral valve.

11. Diphtheria of Stomach.—A male child, aged 3 years, was first seen by Tylecote on the fifth day of a very severe attack of diphtheria, and up to that time had been given no antitoxin. Patient had a subnormal temperature and was very toxic in appearance; there was false membrane covering the posterior pharyngeal wall, tonsils, uvula, the whole of the soft palate, and extending forward on the hard palate almost up to the teeth. Considering the extent of the membrane and the duration of the disease without any antitoxin treatment, the case was regarded as hopeless from the first, but in order to give the paatient any possible chance Tylecote injected 8.000 units of antitoxin at once into the left median basilic vein, following this the next morning by a similar injection into the right median basilic. In the forty-eight hours after this he gave him three more injections of a similar amount of antitoxin subcutaneously. However, he died of toxemia on the tenth day of the attack, having vomited blood the day before and having developed scattered petechiae about the body, both not uncommon signs in toxic diphtheria.

The post-mortem examination showed nothing unusual for this type of case, except the stomach. The mesenteric lymph-nodes were deeply injected; there was toxic myocarditis; the left ventricle contained adherent fibrinous clot; the superior longitudinal vein contained a thrombosis; the bulk of the blood was in the abdominal cavity—all of these the usual post-mortem findings for this class of cases. The stomach mucosa was covered by a typical diphtheritic membrane. It was loosening in places, but none had separated at the time of the examination. It was definitely limited to the boundaries of the stomach, and did not extend into the esophagus, nor yet into the duodenum. Smear preparations were made at the time from fragments of the false membrane and typical clumps of Klebs-Loeffler bacilli were easily found. At the time of the post-mortem examination considerable swelling of the mucosa was evident, and on stripping off the membrane in places the hemorrhagic injected state of the mucosa was very marked. Tylecote regards this case as true diphtheria of the stomach, or diphtherial gastritis, and not, as some of the recorded cases are, merely a membranous or diphtheritic gastritis, due to circulation of the diphtherial toxins in the blood-stream.

Glasgow Medical Journal

May, LXXIX, No. 5, pp. 321-399

12 Passing of Tuberculosis. R. W Philip.
13 *Cases Illustrating Certain Urinary Conditions in Women Associated with Frequent or Painful Micturition. D. Newman.

13. Certain Urinary Conditions in Women.—Newman cites eight cases: 1. *Bacillus coli* infection of bladder at fifth month of pregnancy. Incomplete recovery; continued irritation of bladder during five years, slight pyuria in acid urine, slowly and steadily increasing pain during and after urination. Thickening of mucous membrane at the neck of bladder and urethra. Application of phenol to urethra, and flushing of bladder. Cure. 2. Frequent urination for two years, with pain only on distention of the bladder, disappearing when emptied. Latterly, pain always present. Moderate pyuria; 5 per cent. pus containing tubercle bacilli; no hematuria. Marked hyperemia of bladder and caseous deposit on floor. Curetted through urethra. Tuberculin R. Well. 3. Five years persistent frequency in micturition. Relieved only by rest and heat. During last three months symptoms resembling stone in bladder. Constant pyuria. Moderate occasional hematuria. Neck of bladder and urethra congested, and small superficial erosions. Phenol applied twice. Cure. 4. Involuntary nocturnal micturation since infancy. Complete control during the day and while awake, no pain, occasional slight pyuria, very acid urine and uric acid in considerable amount. Irrigation and installations. Cure. 5. Long-standing *Bacillus coli* and staphylococcus infection of bladder. Very frequent micturition and severe pain, hematuria and pyuria variable. Marked congestion of mucous membrane of the bladder and urethra. Suprapubic cystostomy, and phenol applied to neck of bladder and urethra. Almost complete relief of symptoms. 6. Very painful and frequent micturition from staphylococcus infection of bladder. Pyuria and hematuria. Only 2 ounces of urine retained. Acute catarrh of base. Instillation of silver nitrate. Suprapubic drain. Lactic bacillus cultures and irrigation. Cure in six weeks. 7. Sudden stoppage of flow during act of micturition, followed by severe spasm of the neck of bladder. Polypi removed. Cure. 8. Movable right kidney causing severe pain at end of micturition, probably by dragging on the right ureter when bladder was emptying itself. Nephrorrhaphy. Cure.

Journal of Laryngology, Rhinology and Otology, London

May, XXVIII, No. 5, pp. 225-280

14 Jarisch-Herxheimer Reaction in Organ of Hearing After Treatment by Salvarsan. K. Theimer.
15 Significance of Fever in Cases of Mastoiditis Complicating Acute and Chronic Suppurative Otitis Media.. R. Verel.

Journal of Tropical Medicine and Hygiene, London

May 1, XVI, No. 9, pp. 129-144

16 Effect of Drainage on Health in City of New Orleans; Statistical Study. J. B. Guthrie, New Orleans.
17 Treatment of Suppression in Blackwater Fever. H. S. Stannus, Zomba, Nyassaland.
18 Spider's Web and Malaria. F. Knab, Washington, D. C.

Lancet, London

May 10, I, No. 4680, pp. 1285-1362

19 *Physiology of Open-Air Treatment. L. Hill.
20 "Colds in the Head." L. Hill and F. F. Muecke.
21 *Symmetrical Necrosis of Cortex of Kidneys Associated with Puerperal Eclampsia and Suppression of Urine. R. Jardine and A. M. Kennedy.
22 Alimentary Toxemia. W. E. Dixon.
23 Chronic Intestinal Stasis. C. H. Fagge.
24 Abnormal Intra-Abdominal Developmental Adhesions. (To be continued.) H. M. W. Gray and W. Anderson.
25 Prognostic Significance of Secondary Polycythemia in Cardio-pulmonary Cases. F. P. Weber.
26 Difficult Labor Caused by Fetal Ascites. S. G. Luker.

19. Physiology of Open-Air Treatment.—Hill is convinced that the whole of the effect of open-air treatment is due to the movement, temperature and moisture of the air and has nothing to do with its chemical properties. Conformity to a better mode of life will enormously increase the health and happiness of everybody. Modern life is tending to put people into confined places, heated by convectors, with perfectly made windows, no draughts and that kind of thing, and it is diminishing the metabolism and vigor, health and happiness of everybody, quite apart from causing consumption. Man cannot go straight into these artificial conditions when he has been for a million years living an outdoor life, facing every element, wind, cold and rain. What must be done is to compromise and arrange matters so that we may get open-air exercise and exposure to wind and weather. Do not put up great skyscrapers or have artificial cellars for people to live in, but have facilities for open air, and playing fields, and exercises for the body.

21. Necrosis of Cortex of Kidneys.—The kidneys in the two cases cited by Jardine and Kennedy were in each case the seat of symmetrical necroses of the cortex. The necrosis was more or less limited to the outer two-thirds of the cortex, and in degree it corresponded in each case with the duration of the suppression of urine. In the two older patients the necrosis was more or less uniform and separated from the living inner third of the cortex by a hemorrhagic zone, and was more advanced in the older case. There was extensive thrombosis of the cortical blood-vessels, which did not extend beyond the margin of the necrotic area, and did not involve the vascular arches, and which was more wide-spread in the oldest case. In the earliest case the necrosis was of a very patchy character, and in the neighborhood of the patches there was intense congestion. Thrombosis of the cortical blood-vessels in this case was conspicuous by its extreme infrequency; in some of the necrotic areas thrombosed capillaries were found, but only rarely were any of the minutest arterioles thrombosed. The authors are inclined to the view that the cause of the necrosis in the kidneys is the same as that which causes necrosis in the liver, and that the thrombosis in the smaller cortical renal arteries is secondary to the necrosis of the renal cells. What, then, initiates the necrosis? It is the deleterious influences on the cells of the eclamptic toxin, whatever it may really be.

Practitioner, London

May, XC, No. 5, pp. 777-908

27 *Peripheral Stasis. J. F. Goodhart.
28 *Diagnosis of Acute Abdominal Conditions of Children.* E. M. Corner.
29 Sequel of Case of Acquired Chronic Acholuric Jaundice—Possibly Case of Tertiary Visceral Syphilis with Pyrexia and Extreme Cachexia. F. P. Weber.
30 Case of Chorion-Epithelioma of Retained Testis with Multiple Metastatic Growths. T. S. Tirumurti.
31 Hairiness or Hypertrichosis and Its Treatment. D. Freshwater.
32 Gonorrheal Urethritis Anterior. A. L. Sachs.
33 Ocular *Diseases in Association with Diabetes Mellitus.* D. M. Mackay.
34 Mental Suggestion by Transference. L. F. Winslow.
35 Influence of Thyroid on Blood-Pressure. H. E. Waller.
36 Testing of Symptoms. K. Digby.
37 Ovarian Dyspepsia. H. G. Webb.
38 Treatment of Erysipelas. F. S. Arnold.

27. **Peripheral Stasis.**—Under the heading "blue brains" Goodhart places instances of such people as have blue hands and, what he calls, St. Paul's fingers—for they die daily, even hourly—they have chilblains, their ears and noses may be red or blue, and associated with such surface appearances there are certain cerebral sensations on which Goodhart lays particular stress. The condition is found in males and females, adults, boys and girls, but is much more common in females than in males, and, it is clearly a part of Raynaud's disease; perhaps a mild and distributed form of that disease. But cold blue extremities and dead fingers are its most common symptoms and paroxysmalism is also a usual feature. But, besides these in the extremities, there are many other conditions associated. Looking over many of his cases Goodhart has noted, as has been shown in part, flushed and blue noses and ears, epistaxis, neuralgia, headache, migraine, all sorts of cerebral sensations, such as a cold feeling in the head, stupidity, woolliness, a far-away feeling, a double self, giddiness, dreaminess, depression, tinnitus, deafness, fainting, falling sickness.

He has seen it several times with anorexia nervosa and melancholia, and it must be a very common feature indeed in the practice of lunacy. But other conditions also have to be considered, such as asthma, breathlessness, heart attacks and arhythmia, puffiness and dropsy. They are all described by Goodhart as conditions of feeble circulation, and, more or less, at the back of their heads many of these people connote an inferior pump, a failing heart. But, he says, it is not due to a failing heart; it is a disturbed peripheral circulation. Although the effect is different, it concerns itself with the same mechanism as blushing and the phenomena of climacteric flushing of women, each clearly a peripheral phenomenon and not a cardiac one. As to treatment, he cites one case in which the abdomen was opened, the pelvis explored and a small residual abscess was found about the appendix; the pus was evacuated; the patient was completely cured, and she remained well for some three and a half years, when she died from embolism after the removal of a rapidly growing uterine fibroid. As a rule, however, the treatment is strict hygiene and a carefully regulated diet.

Journal de Médecine de Bordeaux

May 4, XLIII, No. 18, pp. 275-288

39 *Destruction of Leukocytes in Nephritis and in Acute Infectious Diseases. (La fragilité leucocytaire dans les maladies infectieuses.) J. Carles and P. Mauriac.
40 *Circumcision of Leg for Varicose Ulcer. (Traitement des ulcères variqueux par la methode de Moreschi *modifiée.*) A. Charrier and M. Bardon.

39. **Destruction of Leukocytes in Nephritis and in Acute Infectious Diseases.**—Carles and Mauriac are convinced that the fragility of the leukocytes is an important index of the resisting powers of the organism and is thus useful for the prognosis in many conditions. They agree with Feuillié that in a certain proportion of cases albuminuria is the result less of pathologic conditions in the kidneys than of lessened resisting powers on the part of the blood corpuscles, especially the leukocytes. They have been making a special study of this question, and report the findings in fourteen cases of nephritis, in two healthy persons, and in seven cases of pneumonia, diphtheria, acute rheumatism or typhoid fever. They estimate the numbers of apparently sound and much destroyed leukocytes in a smear, counting across the field on a straight line, and state that in health the broken-down leukocytes number about 7 per cent., but in nephritis the figure runs up to 40 or even 64 per cent.; the larger numbers correspond to severe impairment of the general health. Their work was all done on adults, and they call attention in particular to the way in which the leukocyte fragility index dropped from 24 to 7 per cent. in a case of diphtheria in a few hours after injection of antitoxin. In a case of dysentery, the fragility index dropped as the patient improved, but rose again to the first high figure or above during a relapse. In a case of typhoid of a severe type, the index was very high at first but later the leukocytes became more resistant; this occurred immediately after a profuse intestinal hemorrhage, showing that loss of blood is liable to affect the fragility index. The technic for determining the index is simple: A solution of 6 gm. of sodium citrate and 7 gm. of sodium chlorid to the liter of water is the vehicle employed; 20 drops of this solution and 10 drops of distilled water are mixed and 1 drop of blood is added. After waiting twenty minutes, the tube is centrifuged and the sediment is spread on a slide with a piece of cigarette paper held by one edge and resting its weight at the other end of the specimen. With a little practice it soon becomes a simple routine procedure and permits instructive comparison of conditions, especially with charts, such as he appends, showing the albumin, amount of urine, temperature and fragility index.

40. **Circumcision of Leg for Varicose Ulcer.**—Charrier and Bardon have applied what they call Moreschi's technic in three cases of intractable varicose ulcer in two women of 48 and a man of 27. The rapid and complete cure of the distressing affection has convinced them of the superiority of this method, in cases contra-indicating excision of the saphenous vein. It can be done under local anesthesia; the healing was complete in their cases in much less than a month. A circular incision is made about 4 cm. above the ulcer, carried down to the fascia, with careful hemostasis and suture. Moreschi makes a second circumcision above the ankle, but this is generally regarded now as superfluous.

Presse Médicale, Paris

May 3, XXI, No. 36, pp. 357-368

41 Diagnosis of Disease of the Chest Before Percussion and Auscultation Were Invented. E. Rist.
42 Advisability of Utilization of Insect Aids in Destruction of Noxious Species. E. Brumpt.
43 Exanthems as Symptom of Leukemia, etc. A. Nanta.

Semaine Médicale, Paris

April 30, XXXIII, No. 18, pp. 205-216

44 Ileus from Compression of Intestine Between Gravid Uterus and Promontory. (Autour de l'occlusion intestinale d'origine gravidique et de son mécanisme.) R. de Bovis.

May 7, No. 19, pp. 217-228

45 *Behring's Vaccination Against Diphtheria. (Sur un nouveau moyen préventif contre la diphtérie.) E. v. Behring.

45. **Behring's Method of Vaccination against Diphtheria.**—Behring's communication at the recent annual meeting of German internists created quite a sensation. It was mentioned in the Berlin Letter, May 31. Behring insists that his method of immunization with a combination of antitoxin and very virulent diphtheric poison has some entirely new features. It was rendered possible by his recognition of the fact that the ass, monkey and other large animals behave differently from guinea-pigs in the matter of response to immunizing injections and human beings still more so. He reviews the various experiences that have been made with his remedy to date as it has been applied in about eighty cases. No dangerous reaction was observed in any instance. It seems to confer immunity similar to vaccination against small-pox, without injuring the health but rendering the individual long immune to the disease. Before injecting the new vaccine he examines the blood for the exact antitoxin content, and then again three weeks after the vaccination and again later at regular intervals. One child thus vaccinated had its antitoxin figure run up to 600,000, breaking the record. He states that the aim of his preventive vaccination is to confer lasting immunity and also to obtain an antitoxin of human origin which may be used on others for homogenic vaccination. Fifteen years ago he declared his conviction that a homogenic antitoxin would probably confer much more lasting immunity than a heterogenic antitoxin. His research on horses, cattle and goats has confirmed this principle of the greater permanency of the immunity when the antitoxin is derived from the species to which the vaccinated individual belongs.

Beiträge zur klinischen Chirurgie, Tübingen

April, LXXXIII, No. 3, pp. 451-730

46 *Tumors in the Pineal Gland. (Zur Pathologie und Operabilität der Tumoren der Zirbeldrüse.) H. Rorschach.
47 After-Effects of Suture of Nerves. (Ergebnisse der Nervennaht.) H. Ströbel and Kirschner.
48 Scapular Cracking Sound. (Scapularkrachen.) W. Lobenhoffer.
49 The Blood-Picture with Goiter. (Das Blutbild bei Strumen und dessen Beeinflussung durch die Strumektomie.) E. Nägelsbach.
50 Local Anesthesia and Nerve Blocking. (Zur Lokal- und Nervenleitungsanästhesie.) A. W. Meyer.
51 Fractures of Joints. (Zur Diagnose und Behandlung einiger Frakturen besonders der Gelenke.) A. W. Meyer.
52 Operations on the Ears Under Local Anesthesia. (Die Radikaloperation des Ohres in Lokalanästhesie, ihre Technik und Nachbehandlung.) D. Kulenkampff.

46. **Tumors in the Pineal Gland.**—Rorschach reports a case in a young man who died the second day after the second step of the operation for removal of the tumor. Rorschach discusses the findings and the accessibility of such tumors and then reports the successful removal of a tumor in the corpora quadrigemina of a young man of 27. He states that forty-seven cases of pineal gland tumors are on record; the fifteen patients with sarcoma were between 10 and 20 years old and all but one were males, as also the four carcinoma patients (ages 19 to 24), the six with glioma, the five with teratoma and each of the other varieties except the eight cystoma cases which were all in women except two. The features of the cases all confirm the assumption that the pineal gland is concerned in the development of the secondary sexual characters in males. Children with pineal gland tumors show giant growth and premature development of the genitals and hair on the body. One girl of 9 was obese but the genital organs were apparently normal. Marburg is inclined to accept that insufficiency of pineal functioning leads to hypertrophy of the genitals while excessive functioning leads to the pineal type of obesity. In the personal case reported by Rorschach the young man had been employed as a kitchen chef and had been intelligent and industrious until the last two or three years when he became irritable and gradually developed hallucinations. He was placed in an asylum for the insane where symptoms developed suggesting a tumor in the pineal gland, as described in detail. He was inclined to obesity and the testicles were undescended; the case evidently belongs to the class of hyperpinealism; in fact the tumor contained large amounts of pineal gland tissue.

Berliner klinische Wochenschrift

April 28, L, No. 17, pp. 765-812

53 *Arteriosclerosis. A. Fraenkel.
54 Infectiousness of Human Syphilitic Material for Rabbits. (Weitere Mitteilungen über die Infektiosität des Blutes und anderer Körperflüssigkeiten syphilitischer Menschen für das Kaninchen.) P. Uhlenhuth and P. Mulzer.
55 *Febrile Conditions in Relation to Digestion. (Infektion und Verdauung.) L. F. Meyer.
56 *Biologic Tests for Pregnancy and Cancer. (Verwertbarkeit der Abderhalden'schen Fermentreaktion bei Schwangerschaft und Carcinom.) N. Markus and A. Münzer.
57 Childbirth in Elephantiasis. (Schwangerschaft, Geburt und Wochenbett bei ausgedehnter halbseitiger Teleangiektasie und Varicenbildung mit lymphagiektatischer Elephantiasis.) H. Drews.
58 Diabetes and Non-Diabetic Glycosuria in One Person. (Diplomelliturie.) H. Stern (New York).
59 *Treatment of Neuralgia of the Trigeminus by Injection of Alcohol into the Gasserian Ganglion. A. Loevy.

53. **Arteriosclerosis.**—Fraenkel remarks that the term "atherosclerosis" describes better the mechanical changes in the walls of the vessels, and it has the advantage of being applicable to analogous processes in the veins and in the heart valves. In practice, however, the involvement of the arteries is of such paramount importance that we are justified in retaining the old term "arteriosclerosis." He emphasizes the importance of general hygiene and moderation in all things in preventing and relieving the disturbances from arteriosclerosis, and urges the necessity for tentative antisyphilitic measures in younger patients. Acute infectious diseases seem to promote the development of changes of this kind, especially influenza, as also severe and long-continued emotional stress and worry. Neurasthenics are particularly liable to develop arteriosclerosis early, according to his experience. He reviews its various manifestations in detail.

55. **Influence of Fever on Digestion.**—Meyer has been studying this subject on dogs with a Pawlow isolated stomach sac. The tests were numerous and varied, and in all the secretion of gastric juice was materially reduced, proportional to the severity of the febrile disturbance, even with aseptic fever from injection of turpentine. The gastric secretion dropped to one-third or one quarter. If these findings can be applied to human beings they readily explain the digestive disturbances with fever. In infants especially, the lack of the bactericidal hydrochloric acid permits proliferation of bacteria in the intestines which interfere with normal digestion and bring on vomiting, diarrhea and loss of appetite. It is possible that febrile infections have an inhibiting influence on other glands involved in digestion as well as on those secreting the gastric juice.

56. **Serodiagnosis of Pregnancy and Cancer.**—Markus reports the application of Abderhalden's technic to twenty pregnant women and in eleven cases of carcinoma, the results all corroboratory.

Münzer remarks that Abderhalden's work has brought into prominence the pathogenic importance of the secretion from pathologically altered gland substance; besides hypersecretion and hyposecretion of the ductless glands we must now recognize the morbid secretion, the throwing off of unfinished or morbidly altered substances from the gland. As they are not ripe to be taken into the circulation, they act as a foreign material and are liable to do great harm. Not the quantity of the secretion of the gland but its quality is the condition for health or for disease. Fauser was one of the first to apply practically the knowledge learned from serodiagnosis. He found substances foreign to the blood circulating in the blood-stream in various forms of mental disease. (Abstr. 63, p. 949, The Journal, March 22, 1913.) He found a substance from the genital glands circulating in the blood-stream in cases of dementia praecox, and Münzer regards this as pointing the way to discovery of the causes of mental disease; we are no longer groping in the dark but have now a light to guide us. He adds that the cerebrospinal fluid should also be examined for foreign elements, testing the fluid for brain substance in dementia praecox and general paralysis. *Although we have* no means to act directly on the morbidly perverted glands yet we can exert an influence by administering gland substance *from the antagonistic organs.* It is possible that in dementia praecox a combination treatment with tissue *from* the adrenals, hypophysis and pineal glands might annul the disturbing influence from the pathologic glands.

59. **Alcohol Injections into the Gasserian Ganglion.**—Loevy has been applying on forty cadavers the method of injection of alcohol into the ganglion through the oval foramen and discusses special points in the technic. He then reports the successful application of the method to a *man* of 77 with unbearable neuralgia during the last three months, with severe arteriosclerosis and bronchitis. About 0.8 c.c. of alcohol was *injected and the man said* that he felt as if that side of his head had been struck by lightning but after a minute or two all pains ceased. He could eat at once without a trace of pain and there has been no recurrence during the nearly five months since. The patient regards his relief as an actual miracle.

Deutsche medizinische Wochenschrift, Berlin

May 1, XXXIX, No. 18, pp. 825-872

60 Insoluble Antimony Salts in Small Doses Effectual in Treatment of *Trypanosome Diseases.* (Neue Prinzipien und neue Präparate für die Therapie der Trypanosomeninfektionen.) W. *Kolle, O. Hartoch, M. Rothermundt and* W. Schürmann.
61 Serotherapy of Tuberculosis. (Das Marmorek-Serum in der Behandlung der Lungentuberkulose.) K. Henius and M. Rosenberg. Commenced in No. 17.
62 *Hemorrhage from the Lungs After Perforation of Aortic Aneurysms. P. Hampeln.
63 *Anatomic Bases for Placenta Praevia and Their Importance for Treatment. O. Pankow.
64 *Congenital Hematoporphyria and Beard Growth in Women.* C. Hegler, E. Fraenkel and O. Schumm.
65 Resisting Powers of Red Blood-Corpuscles Not Reduced in *Tuberculosis.* (*Resistenzbestimmung* der Erythrozyten bei Tuberkulose.) K. Weihrauch.
66 Tumors in the *Omentum. (Zur Genese der Netztumoren*—Epiploitis plastica.) E. Holländer.
67 Modified Technic for Wassermann Reaction. (Zur Modifikation der Wassermann-Neisser-Bruckschen Reaktion nach M. Stern.) L. Quadflieg.
68 Herpes of the Brow with Bacteria Found in Gasserian Ganglion. A. Sunde.
69 Exanthem After Use of Copaiba. (Ueber das gehäufte Auftreten von Exanthemen nach dem Gebrauch von Copaivabalsam.) W. Fischer.
70 Correction of Outstanding Ears. (Knorpelfaltung bei abstehenden *Ohren und Othämatom.*) Wiemann.

62. **Bleeding from the Lower Air Passages with Aneurysm of the Aorta.**—Hampeln states that in his 108 cases of aneurysm of the aorta it had perforated into the trachea or a bronchus in fifteen, and in ten in this group *the* bleeding was *prolonged* over a considerable period before the final fatal gush. Bleeding *may* occur from the lower air passages or lungs with an aneurysm but due to some independent cause, or to some infarct or *other* trouble directly connected with the aneurysm. Or there may be long continued prodromal slight hemorrhages.

63. **Treatment of Placenta Praevia.**—Pankow analyzes the anatomy *of the region calling* attention to the imperfect contracting power of the segment between the internal and the external os even in normal conditions. When the *placenta* is implanted on or has grown into this isthmus segment it becomes very vascular and its power of contraction is practically entirely lost. After removal of the placenta the isthmus is *incapable* of contracting enough *to* arrest the hemorrhage when it has *once* been stretched wide. The aim in treatment, therefore, should be to avoid any stretching of the isthmus segment. The uterus therefore must be evacuated from above, preferably by *abdominal* cesarean section. His experience with forty cases in which treatment was *applied on* this principle gave only 2.5 per cent. mortality for the children while there was no mortality from hemorrhage among the mothers. Of course, the method is applicable only to the cases free from infection. In the home it must be borne in mind that any forcible dilatation of the isthmus segment is liable to entail hemorrhage and laceration. After puncture of the membranes, application of the metreurynter or version, *expectant treatment* should be the rule until the child is spontaneously expelled. When the hemorrhages have once been arrested, he warns expressly against saline infusion *and measures to* raise the blood-pressure as they are liable to start a new hemorrhage. They are indicated when the vascular system is closed by ligatures, as during an operation for tubal rupture, but not when the vessels are gaping as with placenta praevia.

Deutsche Zeitschrift für Chirurgie, Leipsic

April, CXXII, Nos. 1-2, pp. 1-170, with Index for Vols. CXI-CXX

71 Paravertebral Local Anesthesia. (Experimentelle Untersuchungen über Novokain bei Paravertebralinjektion.) S. Muroya.
72 From the Seat of War. (Chirurgische Erfahrungen aus dem Balkankriege.) W. Goebel.
73 Acute Strangulation of Intestine. (Zur Aetiologie, Symptomatologie und Pathogenese der akuten Darmstrangulation.) A. Polacco and A. Neumann.
74 Radial Dislocation of the Wrist. (Luxation der Hand radialwärts mit isolierter Luxation des Kahnbeins volarwärts.) W. Speck.
75 *Fascia Grafts. (Ueber freie Fascientransplantation.)* O. Warschauer.
76 *Cure of Erythomelalgia by Section of Posterior* Spinal Roots. (Ein durch die Foerstersche Operation erfolgreich behandelter *Fall von Erythromelalgie.)* J. Mayesima.
77 *Infusion of Sugar Solution in Prophylaxis of Thrombosis. F. Kuhn.
78 Experimental Research on Acute Blood-Borne Osteomyelitis. F. L. Dumont.
79 Revolution in Treatment of Surgical Tubérculosis since Direct Sunlight Therapy has been Introduced. (Chirurgische Gedanken über die Heliotherapie, besonders bei tuberkulösen Erkrankungen im Kindesalter.) R. Leriche.
80 Cure of Tabetic Gastric Crises by Stretching the Solar Plexus. R. Leriche.

77. **Sugar Solution for Infusion in Prophylaxis of Thrombosis.**—Kuhn's recommendation of sugar solution as an improvement over the usual saline solution for proctoclysis, rinsing out the peritoneum, etc., has been already mentioned in The Journal. He here reports experimental research and clinical experience which confirm the assumption that the sugar solution checks coagulation of the blood, possesses decided nutritive value and antitoxic action, and raises the blood-pressure, *seemingly regulating* the heart-action. The best strength seems to be a 4 per cent. solution of grape sugar or a 7.9 per cent. solution of milk sugar; this *corresponds to an isotonic solution and it is important* to ensure this. He therefore has used a 4 per cent. grape sugar solution containing 0.85 per cent. cooking salt and regards this as a *great improvement over other methods* for warding off thrombosis. Any concentrations above or below this are liable to have a destructive action on the blood-corpuscles and induce collapse, as they upset the *osmotic* balance in the cells. He reaffirms that isotonic solutions of grape sugar have proved *entirely harmless* and, judging from the clinical experiences related, may be used to advantage in *all surgical* procedures. He adds that 1 gm. sugar to the kilogram of body weight seems the upper maximum limit. This amounts to about 50 gm. for an adult of average weight. By adding 40 gm. sugar to a liter of the infusion fluid, we thus have a 4 per cent. solution in the liter to be infused as the standard dose. He is inclined to agree with Schücking *that other* salts *enhance* the physiologic value of the infusion fluid, and hence now makes out his prescription as follows: Dextrose, 4 gm.; sodium saccharate, 0.04 gm.; potassium *saccharate,* 0.04 gm.; sodium chlorid, 0.85 gm., and 100 gm. distilled water. The literature on the subject is reviewed, the data all tending *to confirm* the harmlessness and peculiar efficiency of isotonic sugar *solutions* for subcutaneous or, preferably, intravenous administration.

Medizinische Klinik, Berlin

April 27, IX, No. 17, pp. 653-692

81 *Regulation of the Diet at Health Resorts. (Die Diät in den *Kurorten.)* H. Strauss.

82 *Arteriosclerosis of Kidney Arteries. (Ueber die Störungen bei der durch Arteriosklerose der Nierenarterien bedingten Schrumpfniere und deren Behandlung.) F. Hirschfeld.
83 Treatment of Curvature of the Spine. (Skoliosenbehandlung.) E. Mayer.
84 *Bladder Stones in Diabetics. (Zuckerkrankheit und Blasensteine.) B. Goldberg.
85 Balneotherapy in Heart Disease. (Vergleichende praktische Erfahrungen in der Balneotherapie der Kreislaufstörungen im Kohlensäurestahlbad und im Solbade.) Krone.
86 Mendel's Laws Govern Hemophilia. (Erklärung der Vererbungsgesetze der Hämophilie auf Grund der Mendelschen Regeln.) G. Riebold.

81. **Diet at Health Resorts.**—Strauss urges systematic regulation of the diet, according to individual conditions, as an integral part of spa treatment. He presented a resolution at the recent International Congress on Physiotherapy urging the introduction and systematic application of rational courses of diet for the sick and that physicians should send their patients only to such health resorts where the patients will get the necessary care for their diet. This resolution was unanimously adopted by the congress and the Balneologic Association has since announced that the Heinrich Brock prize next year will be awarded for the best pamphlet on the subject of warning the managers of health resorts of the importance of dietetic regulations for persons taking courses of treatment, and outlining plans by which such regulations can be introduced and enforced.

82. **Treatment of Contracted Kidney.**—Hirschfeld refers to real contracted kidney, the result of disturbances from sclerosis of the renal arteries. His experience does not indicate that this form is particularly malignant. Its most striking feature is the small output of urine; this is encountered in the contracted kidney from arteriosclerosis as well as in that from the atrophy from advancing age. It is possible to benefit materially by limiting the intake of albumin and living mostly on oatmeal and rice, with more fat. This will relieve the disturbances and the composition of the urine comes to correspond with the urine of younger persons. By reducing the protein in the food, the kidneys are spared much work.

84. **Diabetes and Bladder Stones.**—Goldberg states that in four of his eighty cases of bladder stones the lithiasis was complicated with diabetes. In each case the disturbances from the stones were ascribed to the diabetes itself and the stones had been overlooked. The treatment should be litholapaxy alone and his experience shows that this can be done without infection of the bladder.

Münchener medizinische Wochenschrift

April 29, LX, No. 17, pp. 905-960

87 Roentgentherapy of Genital and Mammary Cancers and Myomas. G. Klein and G. Hirsch.
88 Reduced Agglutination of Typhoid Bacilli in Alkaline Medium. M. Riemer.
89 Biologic Reaction in Mental Degenerates. (Ueber eine Komplementbindungsreaktion bei angeborenem Schwachsinn und anderen degenerativen Zuständen des Zentralnervensystems.) H. Froesch.
90 *Serodiagnosis of Tumors. (Ueber Serodiagnostik der Geschwülste mittelst Komplementablenkungsreaktion.) J. Halpern.
91 *Serodiagnosis of Pregnancy. (Zur Bewertung der Abderhaldenschen Schwangerschaftsreaktion.) F. Heimann.
92 Stenosis of the Small Intestine. (Bemerkungen über Dünndarmstenose.) J. E. Schmidt.
93 Fatal Peritonitis after Laminaria Dilatation. P. Hussy.
94 *Atrophic Myotonia. G. Grund. Commenced in No. 16.
95 From the Seat of War. (Vom Kriegsschauplatz in Montenegro.) E. v. Düring.

90. **Serodiagnosis of Tumors.**—Halpern reports application of von Dungern's complement deviation test in 300 cases. Of the seventy-nine carcinoma patients, 89.8 per cent. gave a positive reaction while the reaction was negative in 92.8 per cent. of fifty-six patients free from tumors. He calls attention in particular to the case of an apparently entirely healthy man whose mother had cancer of the breast; he gave a positive reaction as also the apparently healthy daughter of a woman with malignant lymphoma. Is it possible, Halpern asks, that these two healthy persons harbor a predisposition to cancer or are they in the precancerous stage?

91. **Serodiagnosis of Pregnancy.**—Heimann's experience with 100 cases confirmed in every respect Abderhalden's statements in regard to the serodiagnosis of pregnancy.

94. **Atrophic Myotonia.**—Grund reports four new cases of myotonia with atrophy of the muscles, in three men between 22 and 47 and a woman of 47, the mother of two of the other patients. The muscles most involved were those of the face and part of those in the neck and forearms. He regards it as an independent morbid entity and not merely a secondary stage of Thomsen's disease. In the familial cases, it began at the age of 10 in the boys and at 18 in the mother, and the trouble was most severe in the younger generation.

Therapeutische Monatshefte, Berlin

May, XXVII, No. 5, pp. 337-400

96 Modern Treatment of Wounds in Peace and War. Graf.
97 Plastic Restoration of the Cheek. (Vorschlag zum plastischen Ersatz der Wangenschleimhaut.) V. Schmieden.
98 Prophylaxis of Lead Poisoning in Storage Battery Works, etc. (Wie können im Betriebe von Akkumulatorenfabriken Bleivergiftungen entstehen?) E. Böttrich.
99 Propaganda for Reform. (Wünsche zur Reform des Arzneivertriebes.) E. Seel.

Therapie der Gegenwart, Berlin

May, LIV, No. 5, pp. 193-240

100 *Proctoclysis with Sugar Solution in Treatment of Diabetes. (Behandlung des Diabetes mit Zuckerklistieren.) H. Lüthje.
101 *Intravenous Infusion of Sugar Solution to Arrest Hemorrhage. (Stillung innerer Blutungen durch intravenöse Traubenzuckerinjektionen.) E. Schreiber.
102 *Extra-Uterine Pregnancy. R. Mühsam.

100. **Proctoclysis with Sugar Solution in Treatment of Diabetes.**—Lüthje has been very much pleased with his success in administering grape sugar to diabetics by rectal injection, a drop at a time, by the proctoclysis method. The sugar is absorbed in this way in diabetes much better than when taken by the mouth. He has repeatedly witnessed the subsidence of acidosis under the influence of the sugar enemas. The proportion of sugar in the blood increases under this sugar solution proctoclysis, while it remained unmodified in three persons given salt solution instead of the sugar, but otherwise with the same technic. He had other patients sip the sugar solution by the mouth, taking as long to ingest a liter as when it was given by protoclysis, but the proportion of sugar in the blood did not increase in the same way as when it was given by the rectum. This proved that it was absorbed and assimilated better from the rectum than from the alimentary tract, and that the effect could not be explained by the slow and gradual intake. Experiments on dogs showed further that much more sugar appeared afterward in the urine when an isotonic 5.4 per cent. solution of sugar was injected directly into the portal vein than when an equal amount was injected into the femoral vein. He remarks that this is very surprising to find that more sugar gets into the urine when the solution is introduced into the portal rather than into the general circulation. Arnheim, von Noorden, Bingel and others have confirmed the fact that diabetics bear sugar better by the rectum than by the mouth. With the proctoclysis technic most persons are able to absorb from the rectum from one to two liters of fluid during the day, and this with a 5.4 per cent. solution would amount to from 50 to 100 gm. of sugar a day. He has treated in this way ten patients with severe diabetes and gives the charts of two.

101. **Intravenous Sugar Solution to Arrest Internal Hemorrhage.**—Schreiber made an intravenous injection of 200 c.c. of a 5 per cent. solution of grape sugar in a patient with severe hemorrhage from the stomach, and the hemorrhages did not recur. He had a similarly favorable experience in a case of intestinal hemorrhages in typhoid, and since then has applied this measure in a number of cases of internal hemorrhage from various causes. Kausch thus infuses up to 2,000 c.c. of a 5 or 7 per cent. solution, but Schreiber has never injected over 200 c.c. of a 5 up to a 20 per cent. solution. No disturbances of any kind were observed either by Kausch or himself, and his patients did not develop glycosuria thereafter.

Von den Velden ascribes the benefit to the modification in the osmosis, the tissues being compelled to yield up to the body fluids substances which promote coagulation and thus reduce the tendency to hemorrhage. The result of the infusion of a hypertonic solution is a prompt hydremia and rise in the freezing-point of the blood, with increased diuresis. Von den Velden's research was made with hypertonic salt solution, but sugar deserves the preference over salt as the sugar has a nourishing value which is useful for patients debilitated by severe hemorrhages. The sugar solution is better than serum for hemophiliacs as there does not seem to be any danger of inducing anaphylaxis disturbances. In the one case of hemophilia in which Schreiber has tried it, the bleeding kept up the first day, but decreased the second day and by the third day the hemorrhagic tendency seemed definitely arrested; in all preceding bleeding periods the hemorrhages had kept up for a week, very severe. He adds that cane sugar seems to act the same as grape sugar and can be used instead of the latter.

102. **Extra-Uterine Pregnancy.**—Mühsam states that in the last series of 108 patients with tubal pregnancy at the Moabit Hospital there has been no mortality. Thus all these patients since May, 1909, have been saved by a prompt operation. In two of the last 145 cases the women had had a previous extra-uterine pregnancy; in another there was a fetus in both tubes. He ascribes the success of treatment to the early diagnosis and prompt operative measures, not even waiting for the patient to recover from collapse. In some cases he operated without general anesthesia as the patients were totally unconscious. In many cases the pulse did not become perceptible until hours later, notwithstanding the strongest stimulants. The women were generally between 26 and 35 and only twenty-eight had not had one or more previous pregnancies. The interval since the last pregnancy was three years and over in thirty, up to eleven or fifteen years in six cases. A history of irregular bleeding and pains and oppression in the lower abdomen is an aid in the diagnosis, and particularly a fainting fit or premonitory dizziness. But the most instructive differentiating procedure is puncture of the pouch of Douglas. In 117 of the 124 cases in which this was done in the last 145, the findings were positive—if not at once, then soon after the woman had been raised to a half-sitting position. The findings in one case were particularly instructive as the stomach region was extremely painful and the diagnosis had wavered between perforation of a gastric ulcer and necrosis of the pancreas; the blood found in the pouch of Douglas pointed to a tubal pregnancy, confirmed by the operation. The urobilin test and leukocytosis are useful in confirmation but not much reliance is placed on them. He punctures the pouch of Douglas through a speculum, pulling up the uterus with bullet forceps and puncturing directly in the middle, close to the cervix. In thirty-four cases the disturbances came on gradually and the patients were regarded as suspicious of tubal pregnancy and were kept under constant supervision until certainty could be attained. Even with these precautions rupture occurred in one woman with such profuse bleeding that although the physician was at hand and operated at once, yet the patient was unable to rally and died. A minute rupture was found at the uterus end of the tube. Any one who has passed through such an experience always afterward urges immediate operation, once a tubal pregnancy is recognized. In only nine of the thirty-four with the more gradual onset had the tubal pregnancy been diagnosed; in six the uterus had been curetted for supposed abortion. In other cases gall-stones, appendicitis, kidney-stones or peritonitis had been diagnosed. The comparatively rapid growth of a tumor on one side, with absence of fever, speak in favor of a tubal pregnancy rather than disease in the uterine adnexa.

Wiener klinische Wochenschrift, Vienna

April 24, XXVI, No. 17, pp. 649-692

103 *Biologic Test for Cancer. (Die Abderhaldensche Serumprobe auf Karzinom.) E. Epstein.
104 *Modification of Skin Reaction under Influence of Injected Serum and Colloidal Substances. F. Luithlen.
105 *Radium Treatment at St. Joachimstal. (Kurbericht für das Jahr 1912.) F. Dautwitz.
106 Vibrio in Oriental Sore. (Ueber einen Vibrionenbefund in einem Yemengeschwür.) E. Wiener.
107 Ethyl Chlorid Anesthesia of the Mental Nerve. (Kälteleitungsanästhesie am Nervus mentalis.) A. Neumann-Kneucker.
108 *Care of Feet on Walking Tours. (Zur Behandlung des Schuhdruckes.) J. Novak.

103. **Serodiagnosis of Cancer.**—Epstein tabulates the finding in 110 persons, including 37 with cancer, to whom he applied Abderhalden's tests. The findings all confirm the latter's statements.

104. **The Skin Reaction after Injection of Serum or Colloidal Substances.**—Luithlen declares that his extensive experimental research justifies the conclusion that it may yet be possible to find some substance which has the same effect as injection of a specific serum while free from the disadvantages of serotherapy.

105. **The Radio-Active Waters at St. Joachimstal.**—This is the home of radium, and Dautwitz states that last year 1,898 persons took courses of baths in the radio-active waters. He summarizes the results, stating that in multiple sclerosis, for example, improvement was evident in about 63 per cent.; in tabes in 63 per cent.; in poliomyelitis in about 73 per cent.; in sciatica 7.14 per cent. were uninfluenced, while the others showed great improvement; in chronic rheumatism only 9.91 per cent. failed to be benefited, and 13 per cent. of those with chronic gout. The favorable effects realized have persisted to date, the longest interval four years. In many cases, he says, the benefit far surpassed that of any other previous measures in the special cases.

108. **Care of the Feet on Walking Tours, Etc.**—Novak states that blisters and erosions from the shoes can be very easily cured. Experience has shown that these lesions are not due to too narrow shoes. Tight shoes produce corns, but blisters and erosions result from rubbing, the epidermis being thus separated from the corium. The aim should be to prevent friction. This can be done by anointing the region with salve or tallow and applying a bandage which will protect the skin from all rubbing and friction. A pad of cotton spread thick with salve is applied over the lesion and above this a bandage of soft gauze is wound so tight that it cannot slip. The bandage takes up no more room than a stocking and can be worn with ordinary shoes. It is astonishing, he remarks, how the foot can be used afterward and the walking tour resumed without any further pain or disturbance of any kind from this source. If the bandage is left undisturbed two or three days, the lesion will generally be found healed over when it is removed. [Query: Would not applying a thick coat of collodion or a collodion dressing be still better?—Ed.]

Zentralblatt für Chirurgie, Leipsic

May 3, XL, No. 18, pp. 681-712

109 Muscle Flap to Arrest Hemorrhage from Various Sinuses of the Dura Mater. (Zur Technik der Blutstillung an den Hirnblutleitern.) W. Mintz.
110 Technic for Fascia Grafts. (Zur Technik der Fascientransplantation.) Guleke.
111 Stomach Flap for Plastic Operation on Esophagus. (Zur Oesophagoplastik aus der Magenwand.) E. Pflaumer.

Zentralblatt für Gynäkologie, Leipsic

May 3, XXXVII, No. 18, pp. 641-680

112 Etiology of Amniotic Hydrorrhea. S. Dietrich.
113 Mishaps from Ventrofixation; Two Cases. Allmann.
114 Mishaps from Vaginofixation. (Placenta praevia centralis, kompliziert mit absolutem Wehenmangel und Querlage nach Vaginaefixatio.) H. v. Ortenberg. (Schwere Geburten nach Vaginafixur.) Uthmöller.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 1, XXXIV, No. 52, pp. 543-550

115 *Extension in Treatment of Sciatica. (Metodo di Carnot nella sciatica.) G. Tanfani.

115. **Extension in Treatment of Sciatica.**—Great benefit and the final cure of severe chronic sciatica is reported as following extension of the limb by the same technic as for a fracture of the femur. The patient was a man of 57 and the pain was relieved within a few hours after the extension

had been applied with a weight of 3 kgm. The weight was gradually increased each day until 21 kgm. (about 46 pounds) could be borne for two hours at a time by the end of the second week. Tanfani remarks that the possibility of graduating the extension is a special advantage of this method of stretching the sciatic nerve. It proved brilliantly successful in his case; the extension was kept up for sixteen days.

Policlinico, Rome

May 4, XX, No. 18, pp. 621-660

116 Phagedenic Ulcers in Tripoli. (L'ulcera fagedenica a Tripoli.) D. A. Mazzolani. Commenced in No. 17.

Riforma Medica, Naples

April 26, XXIX, No. 17, pp. 449-476

117 Restoration of Urethra with Segment of Vein. (Ricerche sperimentali sul trapianti delle vene nell' uretra.) F. Cuturi.
118 Intravenous Injection of Ergot and Morphin in Hemoptysis. (L'iniezione endovenosa di ergotina e di morfina nelle emottisi tubercolari.) C. Garmagnano.

Medizinskoe Obozrienie, Moscow

LXXIX, No. 1, pp. 1-100

119 *Trypsin in the Stomach. B. Kriloff.
120 *Eosinophilia in Diagnosis and Prognosis of Pulmonary Tuberculosis. I. Chuprin.
121 *Tumors of the Carotid Gland. N. Sinushin.
122 Functions of the Great Omentum. M. Shtutzer.

No. 2, pp. 101-204

123 *Dosage of Antitoxin in Diphtheria. A. Lund and N. Uspensky.
124 Bacteriologic Diagnosis of Diphtheria. S. Teumin.

No. 3, pp. 205-296

125 *Atropin in Stomach Disease. D. Pletneff.
126 *Improved Methods for Diagnosis of Gonococcus Infection. R. Fronstein.
127 *Case of Sporotrichosis; Third on Record in Russia. M. Bremener.
128 Kinking of the Sigmoid Flexure. (O zavorotye S. Romani.) N. Michelson.

119. **Trypsin in the Stomach Content.**—Kriloff studied a number of patients with different gastro-intestinal disorders for the purpose of determining in which conditions and in what amounts trypsin is found in the stomach. He did not attempt to establish the diagnostic value of its presence or absence. Gross' method for determining the presence of trypsin proved superior to other methods. This consists in preparing a 1:1000 solution of pure casein in 1:1000 solution of sodium carbonate. About 10 c.c. of this solution is placed in test-tubes to which the fluid under examination is added. In the presence of trypsin, the casein becomes digested. The stomach contents were removed an hour after a Boas test breakfast or after 75 c.c. of olive oil had been given. Of fifty-one analyses made on thirty-two patients, positive results were obtained in 63.3 per cent. In achylia gastrica the trypsin rate was found to be high, but there was no trypsin found in the cases of hysterical achylia and gastralgia. With cancer, trypsin is always present, especially with cancer of the pylorus, and in other cases of pyloric stenosis. The trypsin was present in chronic gastritis, but missing with cirrhosis of the liver, and greatly diminished with gastric ulcer. Parallel tests for trypsin, pepsin and the acidity of the stomach showed that the higher the trypsin rate the lower is that of acidity and of pepsin. As a rule the amount of trypsin in the stomach contents is small. The findings in the thirty-two cases are instructively tabulated for comparison.

120. **Eosinophilia in Diagnosis and Prognosis of Pulmonary Tuberculosis.**—Chuprin found that eosinophilia in the blood and sputum of patients with tuberculosis of the respiratory organs may be of diagnostic and prognostic value. Thus, in favorable cases of tuberculosis the eosinophils in the sputum and blood increase in numbers. He illustrates this statement by a number of clinical cases which showed a marked increase in these blood-cells when there was improvement in the patient's health, and their absence or marked decrease when there was aggravation of the disease. Diminishing proportions of eosinophils in the blood indicates spreading of the process or possible secondary infection. The eosinophilia in tuberculosis is due, in his opinion, to the same factors as in emphysema, asthma and acute and chronic bronchitis, namely, to lack of oxygen and ensuing chronic asphyxia. The result is decomposition of hemoglobin.

121. **Tumors of Carotid Gland.**—Sinushin describes the carotid gland and its tumors. It is situated at the bifurcation of the carotid artery and its tumors are usually single, the size of a hen's egg, reaching sometimes as high as the mastoid process. Sometimes they are pierced by the artery. When compressed, all the pulsation stops. Laterally they can be moved, but not vertically, nor during the act of swallowing. The sympathetic and vagus nerves are not involved. Such tumors have never been observed before the age of 18. They occur usually between 25 and 30, mostly in women, and on the left side. The growth is slow, causing no subjective symptoms. Operation gives a high mortality (20 per cent.), owing to the cerebral complications liable from ligation of the carotid artery. Yet the possibility of malignant degeneration of the carotid tumor and metastasis renders imperative their operative removal. The carotid artery can be compressed, but must not be ligated; only the external carotid should be ligated during the operation.

123. **Diphtheria.**—Lund and Uspensky report their experience with antitoxin treatment of diphtheria in a large Moscow hospital during the last three years, a total of 2,001 cases, with a mortality of 301. They lay great stress on the dosage. In the mild cases the average dose of antitoxin was about 3,000 units; improvement was evident after ten or twelve hours; repetition of injections was unnecessary; no mortality. In the severe cases, with diffuse involvement of the throat, repetition of the injections of antitoxin was necessary from twelve to twenty-four hours after the first treatment. Of the 422 in this class, seventeen patients died (myocarditis, pneumonia, nephritis). The average dose was 5,500 units, and it usually was followed by several more. This class of cases shows a slight decrease of mortality when compared with that of the previous three years. In the severest type of cases, intubation had to be resorted to several times. Secondary tracheotomy was done in fourteen cases, with 50 per cent. mortality. A primary tracheotomy, without preliminary intubation, was done in severe lesions of the pharynx, edema of the neck and severe asphyxia, and antitoxin was given in large doses (8,834) repeated several times. In this last class of cases the effect of the antitoxin was rather slow; otherwise its effect was marked almost in every case of diphtheria. Unfortunately in the epidemics of diphtheria for the last three years the severer forms were exceptionally numerous, averaging 34.5 per cent. (in 1897 25 per cent).

Excluding the gravest cases, the mortality from diphtheria was considerably lower, chiefly because of larger doses. The dosage for the graver cases was from 8,000 to 24,000 up to 60,000 units, given in ten to fifteen doses. The effect of the antitoxin became evident on the third day if the patient survived. The mortality rate even for these grave cases was lower than in former years (31.7 per cent. as compared with 49.7 per cent. mortality, 1897-99), thanks to the increased dosage. In the laryngeal cases, 300 patients were treated with antitoxin alone, with 5 per cent. mortality. Of 347 that were operated on, 106 died. In 92.8 per cent. intubation was done; in fourteen cases secondary, and in eleven cases primary tracheotomy. Intubation was done at the first signs of suffocation, not always waiting for this. Epinephrin was given in cardiac weakness and when the blood-pressure was low. It proved a life-saving aid especially in those cases of diphtheria in which paralysis developed the seventh or ninth day of the disease, followed by a rapid drop in the blood-pressure.

125. **Atropin in Stomach Disease.**—Pletneff reports his experience with atropin in twenty-eight cases of various stomach disorders. The dose was 0.001 gm. (1/60 grain) hypodermically, once a day, for a period of nine days, and in some cases two weeks. He found that atropin caused decrease of gastric secretion, decrease of its acidity, and reduced the pain and spasmodic contraction, the results corresponding

with those of Riegel's experiments on animals. The reduction in secretory functioning causes diminished acidity, which in its turn puts an end to the pylorospasm and pain. The therapeutic effects of atropin are but temporary, its action being symptomatic only; in this regard it is much superior to morphin.

126. **Improved Methods for Diagnosis of Gonococcus Infection.**—Fronstein says that a gonococcus vaccine injected hypodermically gives a general and focal reaction in patients with any gonorrheal infection. The proper dosage is of paramount importance, but must be individualized to conform to the acute or chronic form, the stage of the process and time of the preparation of the vaccine. Fronstein used several commercial vaccines. When injected into two healthy persons in the amount of 0.4 gm. there was no reaction except pain, while two gonorrheal patients responded after sixteen hours with general (elevated temperature) and local manifestations. There was no reaction whatever in persons who had had gonorrhea at one time but had entirely recovered. The reaction was called positive when about seven hours after the injection there was an elevation of temperature of 0.7 C., accompanied by local manifestations. In fourteen of thirty cases the latter consisted in increased urethral secretion in which gonococci could be found, while before the injection of the vaccine they could not be found in the secretion. In five cases there was, besides the elevation of temperature, increased pain in the testicles. This positive result was confirmed by the presence of gonococci in the urethral secretion after the patient was subjected to proper treatment. In two cases there was after the vaccine injection pain in the joints that had been involved three years previously. In four cases there was no reaction at all, and the diagnosis of gonorrhea was rejected. Fronstein comes to the conclusion that gonorrheal vaccination ought to be looked on as a standard diagnostic method in gonorrheal lesions.

127. **Sporotrichosis.**—Bremener gives an illustrated description of a case of sporotrichosis in a woman of 35, the first symptoms having been observed ten years before. In all the few cases on record a complete cure was realized in a few weeks under large doses of potassium iodid. (Bremener says that the first case on record was published by Schenk in America in 1898; the third case—the first in Europe—not until 1903, thus acknowledging American priority.)

Semana Medica, Buenos Aires

April 10, XX, No. 15, pp. 584-908

129 *Walking Typhoid. (La forma ambulatoria de la fiebre tifoidea.) A. A. Oneta.

129. **Walking Typhoid.**—Oneto gives a historical sketch of this form of typhoid and reports two instructive cases in men. In the first case intense headache was almost the only symptom for a time; the agglutination test applied on three occasions gave a constantly negative response; influenza seemed the presumptive diagnosis, when suddenly the twelfth day there was a hemorrhage of a pint of blood from the intestines, recurring the next day, and two days later intense pain in the intestines requiring morphin. At no time did the temperature go above 37 C. until the sixteenth day, when enemas were given which evacuated the bowels and relieved the pains, but then the temperature ran up to 39 C. and the agglutination test gave positive findings. The rest of the course was that of an ordinary mild typhoid. As typhoid fever owes its principal danger to the complications, and as in the walking cases nothing is done to avert these complications, the prognosis of this form of typhoid, he says, is always grave. He discusses the differential points which permit exclusion of duodenal ulcer. Ulcerative colitis, influenza or gastritis may be deceptively simulated by an afebrile typhoid at first.

Hospitalstidende, Copenhagen

April 30, LVI, No. 18, pp. 473-504

130 *Nematodes in Cancer in Rats' Stomachs. (Undergøgelser over en Nematode—Spiroptera sp. n.—og dens Evne til at fremkalde papillomatøse og carcinomatøse Svulster i Rottens Ventrikel.) J. Fibiger. Commenced in No. 16.

131 Gastric Secretion during Digestion. II. (Undersøgelser over Ventrikelsekretionen under Fordøjelsens Forløb. II.) J. P. Gregersen.

130. **Cancer in Rats Induced by Feeding with Nematodes.**—Fibiger's article is profusely illustrated. It is otherwise practically the same as the one reviewed in The Journal, March 22, 1913, p. 948, with editorial comment p. 1077.

Nordiskt Medicinskt Arkiv, Stockholm

XLV, Medical Section, No. 3, last indexed March 15, p. 874

132 *Prognosis of Chronic Over-Exertion of Heart in Athletes. (Die chronischen Anstrengungsveränderungen des Herzens.) I. Jundell.

133 Action and Fate of Iodin in the Body. (Om två eliminationstyper af jod och två deremot svarande väsentligt olika arter af jodverkan.—Undersökning angående en metod att återställa normalt blodtryck.) C. J. Enebuske. Concluded in No. 4.

134 *Cerebellar Motor Symptoms in Myxedema; Four Cases. G. Söderbergh.

132. **Effect on the Heart of Long Continued Excessive Exertion.**—Jundell says that the dilated heart of long continued extremely severe exercise or manual labor does not seem to have been investigated years afterward, and he here presents a contribution in this line. He recently examined with orthodiagraphy, that is, roentgenoscopy with the rays parallel, ten men who years before had been noted athletes, winning many prizes, and then for a series of years had ceased their athletic work and had devoted their time to mercantile and other business. The findings show that when the heart is not subjected to the strain of alcohol or syphilis, it recuperates and returns in time to the normal size as a rule. Only one of the ten men had a trace of albumin in the urine, and this man had passed through a brief illness consecutive to twenty-four hours' exposure to cold and wet on a sailing trip. The urine was normal in all the others and also the heart findings. It is interesting to note that three of the men had had measles in youth; three scarlet fever and two had had no children's diseases; two had had typhoid in youth, one in this latter group belonging also in the scarlet fever group, and this man's heart was unusually large but the functional findings were normal, the sounds pure and the pulse normal. The roentgenoscopic findings are given for each, with the normal standard for each measurement added for comparison. Jundell warns that measurements of athletes taken just before and after competitive sporting events are not a true index of actual conditions as the excitement and effect of extra training modify the findings. His findings a dozen years more or less after the active exercise has been given up, failed to reveal that the former chronic over-exertion had induced any tendency to disease later. The men now are 25, 29, 33, 36, up to 48 years old; some of them gave up their athletics on account of development of a tendency to hernia.

134. **Cerebellar Symptoms in Myxedema.**—Söderbergh's patients were a man of 50 and a woman of 52 in the last two of the four cases reported, and the disturbances in the gait and other motor functioning in all the cases subsided under thyroid treatment of the myxedema which had developed during the last ten and four years, respectively. Both had a tendency to catalepsy, retaining without fatigue for five minutes the position suggested by Babinski as a test for cerebellar catalepsy. The symptoms promptly disappeared under the thyroid treatment but the mental torpor in the woman did not seem to be modified.

Ugeskrift for Læger, Copenhagen

April 24, LXXV, No. 17, pp. 659-704

135 Treatment of Spastic Paralysis with Both Section of Spinal Roots and Operation to Reduce Force of Antagonist Muscles. (Om et Tilfælde af spastisk Paralyse, behandlet med Foerster's og Stoffel's Operationer.) H. S. Billmann.

136 Favorable Experiences with Babcock's Subcutaneous Extraction Method of Treating Varicose Veins. (Om Babcock's Veneekstraktion.) H. S. Billmann.

137 Transmission of Scabies from Horse to Man; Sixteen Cases. (Hestefnat overført paa Mennesker.) V. Holm.

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light may be completely diffused I make use of frosted glass only.)

The selection of a lamp by no means completed the solution of the problem, since no reflector on the market would focus its rays as desired. Experience had shown an illuminated field of 18-inch diameter, 7 feet from the source of light, to be highly useful. With these data in mind, Professor Waldo, head of mathematics at Washington University, was good enough to plat the curve of an ellipsoidal reflector which permits one to use in the desired manner about five-sixths (some 300 degrees) of the rays emanating from this lamp. Mr. Edwin F. Guth's enthusiasm led him to "spin" these reflectors for me, purely as an experiment; and thus the cooperation of several workers resulted in a solution of the problem.

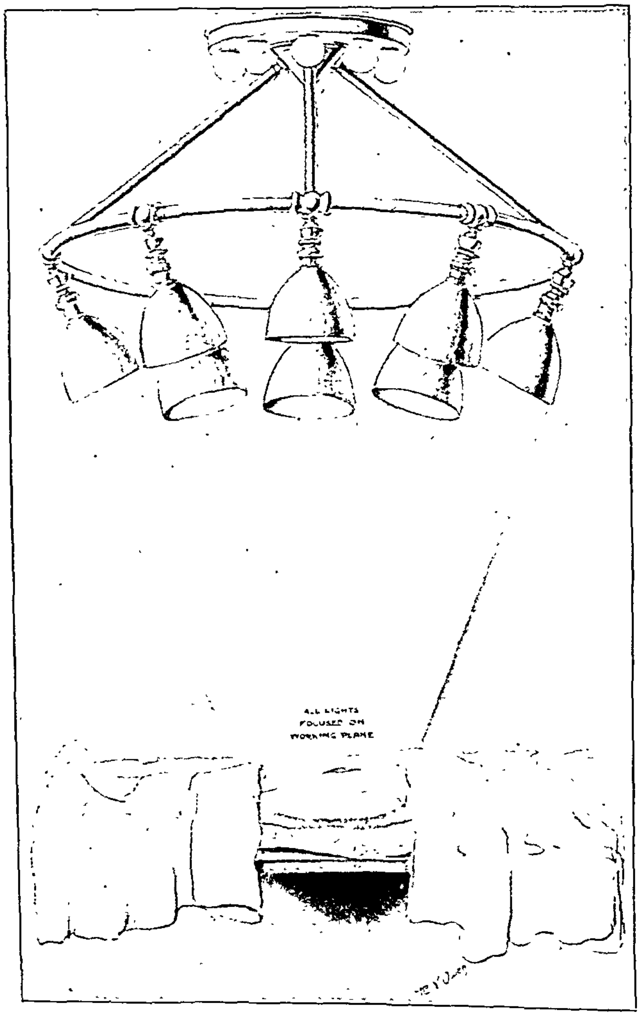


Fig. 2.—Eight lights grouped at a distance of 7 feet from the operating-table.

These ellipsoidal mirrors are 12 inches in diameter by 9 inches deep, dimensions which render them unwieldy, when taking the number used into consideration; hence a depth of but 6 inches is now advised. The slight loss in illumination is of no consequence since the supply that remains is more than abundant.

The accompanying illustrations will give a better idea than can any verbal description of the way in which light from eight sources, in a 6-foot circle, may be made to meet at an angle of 45 degrees on the field of operation. A group of eight other 40-watt lamps set in the ceiling plate takes care of the general room illumination.

The apparatus made up in white enameled steel tubing harmonizes perfectly with other operating-room furniture. Two sets, somewhat modified to surround rectangular mirrors, may be seen at the Mayo clinic, Rochester, Minn., at the present time.

I cannot better state the demonstrated advantages of the contrivance than by quoting from the article mentioned in my opening sentence, naming some of the desirable features which it seemed to possess when installed as an experiment:

> When six automobile head-lights, situated at different points, are focused on a given field, it stands to reason that the illumination is intense and that in this manner shadows are practically done away with. The source of the light is so near the ceiling that no heat from it is noticeable at the level of the operator's head. The globes are frosted and a soft, diffuse glow results. The satisfaction of having a known quality and constant quantity of light at all times is one which will not be fully appreciated by the operator who has not been in possession of it. The fact that beams of light from six sources meet at an angle of more than 45 degrees naturally cuts out all the shadows which obscure the depths of certain wounds. This will be especially appreciated in certain common-duct operations, pelvic procedures, attempts to reach the root of the gasserian ganglion, and others of like nature.

400 Metropolitan Building.

OPERATING DEPARTMENTS FOR MODERN HOSPITALS

WHICH PROVIDE FOR SPECTATORS WITHOUT DISTURBING THE HOSPITAL SERVICE AND PERSONNEL

JOHN R. McDILL, M.D.
Associate Professor of Surgery, Rush Medical College, University of Chicago
MILWAUKEE, WIS.

Clinical surgeons owe to their results as well as to their students, visitors and guests, facilities for observing their work that do not conflict or interfere with the operating-room technic. These advantages, when provision for them is attempted at all, are usually annulled by a mixing of all parties, to the discomfort of most of those concerned and the detriment of the patient. Since the custom of visiting the work of other surgeons has become so well established, this glaring defect is strange in these days of striving for perfection in operating arrangements when it can be so easily remedied.

The new operating departments which are being added to old hospitals, and all of the new institutions, should provide the best possible facilities for visitors, so arranged that they may come and go in the clinics without friction of any sort, and without being gowned.

This can be accomplished by a separate and preferably outside entrance and exit for all not connected with the hospital. This entrance and exit should lead into a room provided with water cooler, telephone, closet, and lavatory conveniences, which serves as a cloak-room and lounging-room; here the visitor should find a bulletin of the operations scheduled for the day, and each case should show the hospital number, so that one can write afterward and ascertain the result in cases in which one is specially interested. This room should connect with the space reserved for spectators,

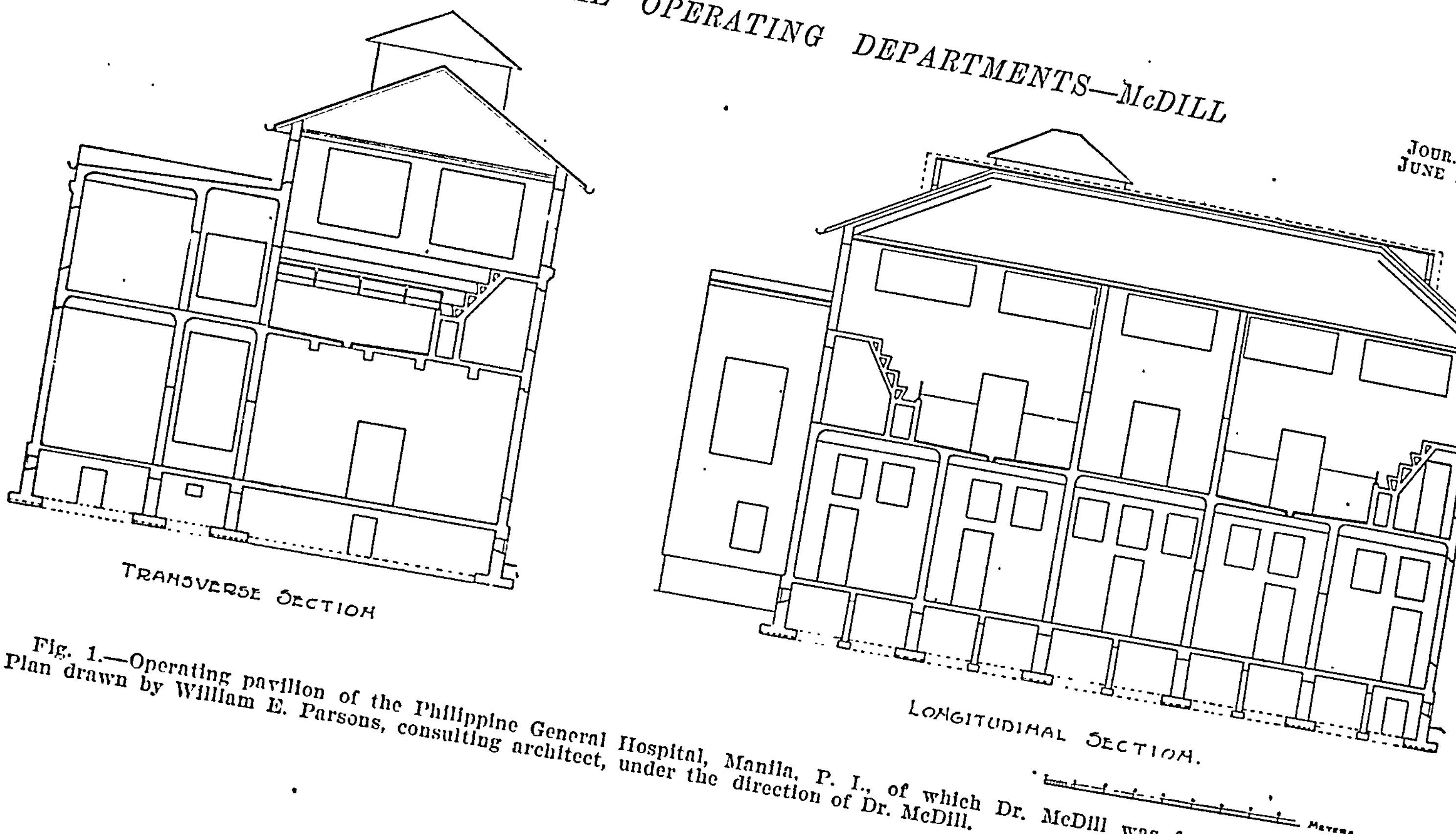
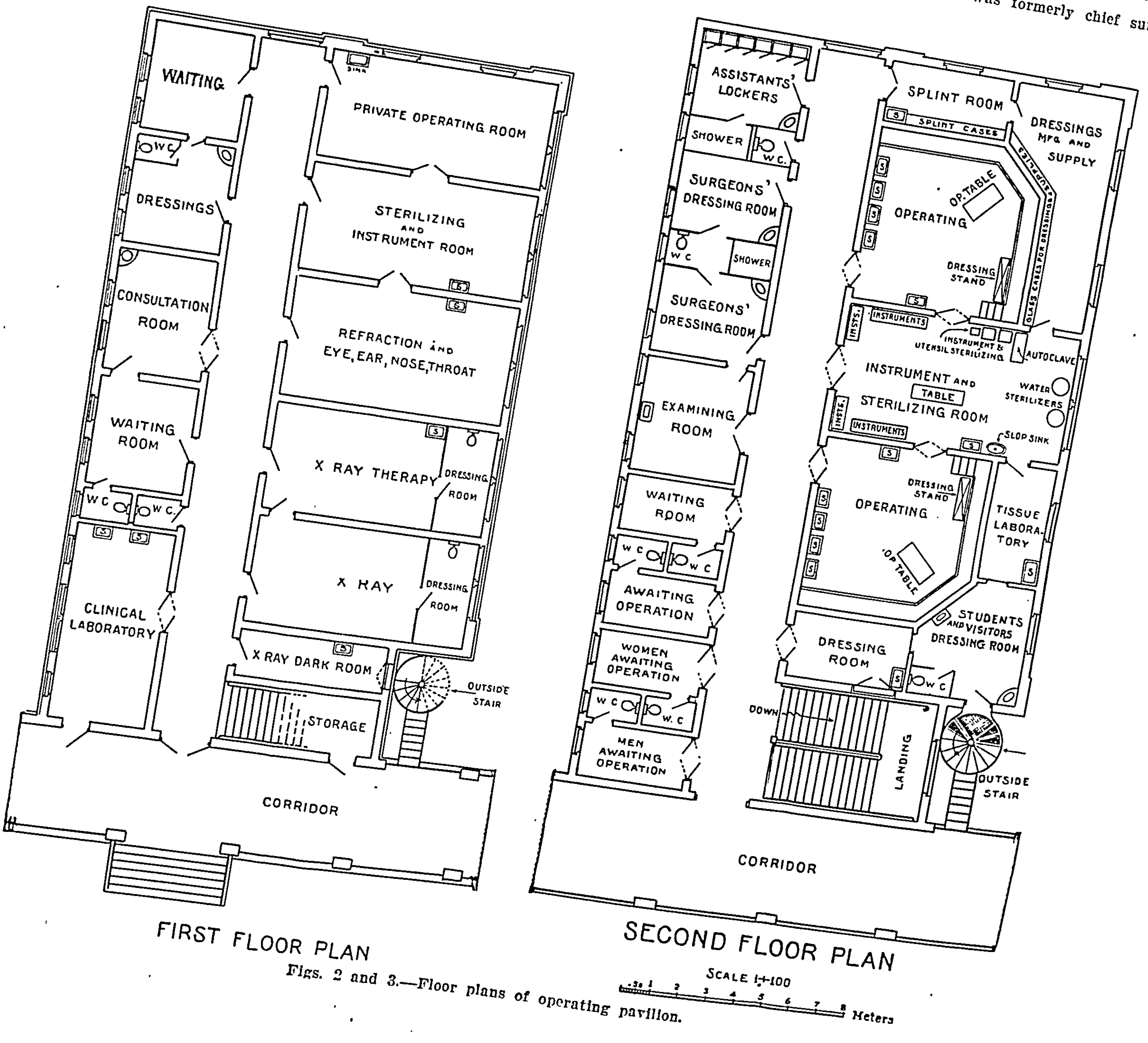
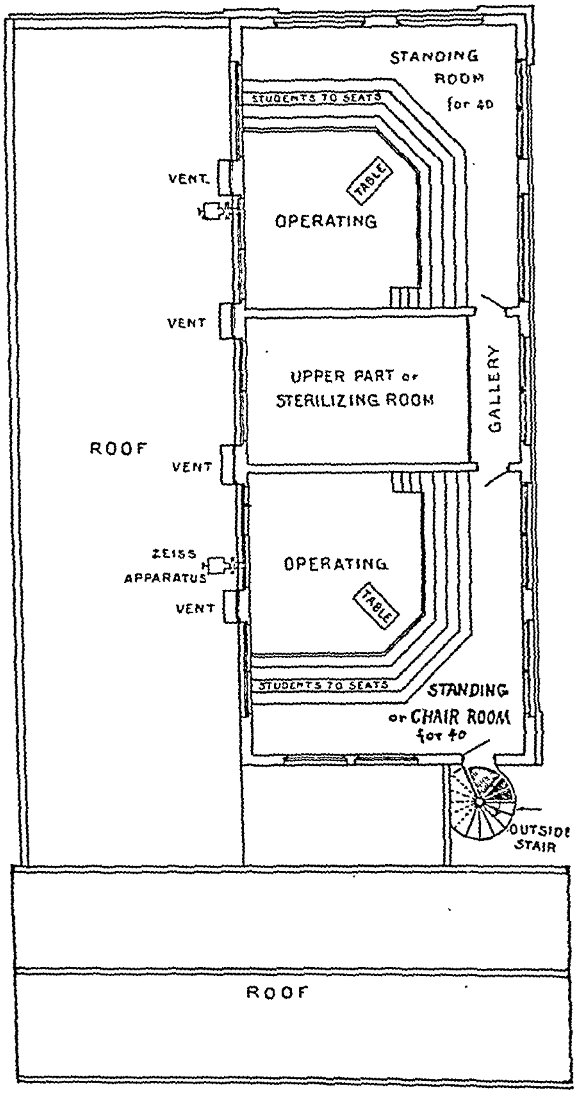


Fig. 1.—Operating pavilion of the Philippine General Hospital, Manila, P. I., of which Dr. McDill was formerly chief surgeon. Plan drawn by William E. Parsons, consulting architect, under the direction of Dr. McDill.



Figs. 2 and 3.—Floor plans of operating pavilion.

and each such space should connect with every other operating-room in the building by bridges (Fig. 6) or galleries several feet above the operating-room floor, and by stairs to those below or above. The seating arrangements for these amphitheaters should never resemble the old type, with its enormous waste of space, designed for spectacular performances and modeled after a Roman coliseum or a Spanish *plaza de toros.* Each visitor up to 100 ought to be provided with a seat from 6 to 25 feet from the operating-table. The accompanying tracings (Figs. 1 to 4) are from a plan which has proved very satisfactory, and the vertical section shows how each spectator is provided with a seat close to the operator. From this seat, which can be reached through a special outside entrance, the visitor can retire at any time without disturbing the hospital service in the slightest, as can be seen on the floor plans. No chairs are provided, the visitors sit on the bare painted concrete benches or steps which are projected forward in such manner as to tier the rows of spectators almost vertically above each other. When these rows are filled, the feet of each man from the second row upward rests on the seat of and between the two men immediately below him. This breaks straight rows so that the head of the person below and in front does not interrupt the view of the one just behind and above him. Although the seats are hard and there is no pretense at comfortable backs the positions are not found to be irksome, and the level space above allows the spectator to stretch a bit and move about.



GALLERY PLAN

Figure 4.

For small hospitals a four-foot space railed off along the outside walls of the operating-rooms and leading across the sterilizing or other intervening rooms will be ample in which to place observation stands, which will accommodate about fifteen persons each. These stands are 30 inches wide, 66 inches high and 114 inches long.

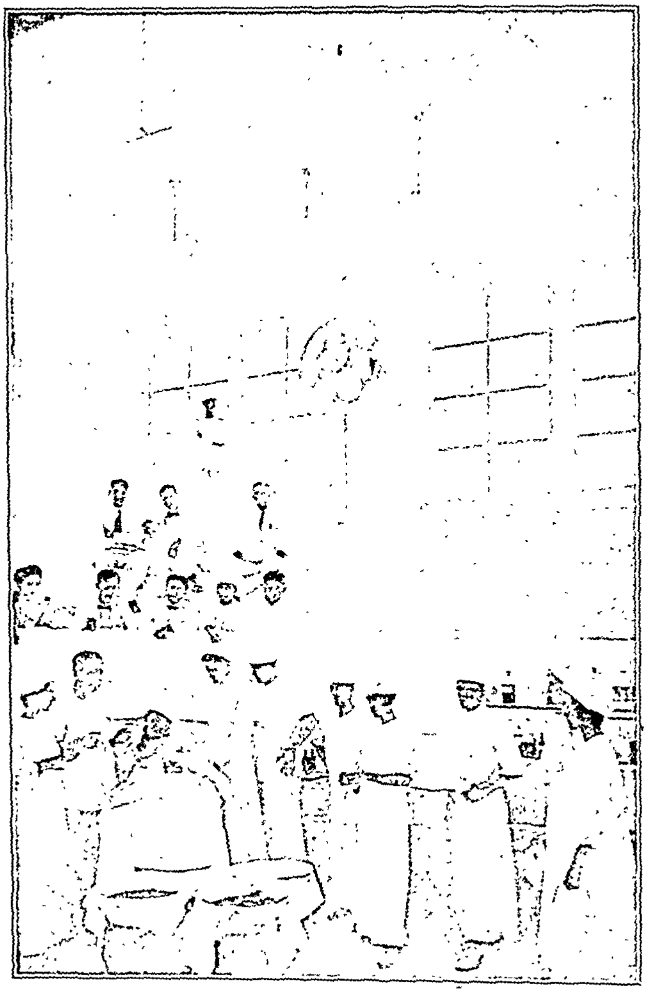


Fig. 5.—View of one operating amphitheater showing the target of the Zeiss illuminating device containing eight distributing mirrors, each of which catches part of the shaft of light from the 30-ampere search-light, and reflects it to a corresponding mirror attached to the ceiling; thence they converge to the desired spot on the operating-table; only five of them show in this illustration, and the horizontal light distributing mirror for perineal work is concealed by the anesthetist.

Another feature which will commend itself to the clinic visitor is the entire absence of drop lights, cranes, and other apparatus, carrying reflectors, wires, head lights, etc., to block his view. The illumination, arranged particularly for teaching, is by the use of eight converging shafts of clear white electric light (Fig. 5), filtered through water and devoid of heat, which floods the operating field and its depths from as many angles, giving an intensive illumination, without shadows, and revealing to the man on the top seat the smallest anatomic and technical details that formerly were visible only to the operator. We used the Zeiss device, which was kept in order by the agent under contract, and there was no noise, no heat, no eye-strain and no dust. This arrangement is for use during the day and makes the clinic independent of the weather and light conditions.

The plan here illustrated shows a special operating unit in a pavilion hospital with the outside entrance for visitors in a spiral stairway which is connected with the corridors uniting the pavilions on each floor level. One corner of the operating-room was cut off in order to place the operating-table so that the spectators would be near to both sides and to the end of the table. As recovery-rooms were provided in each surgical ward building, no space for this purpose was set aside in the operating pavilion. It was necessary to provide the large number of waiting-rooms because the patients who came to the clinics were of so many different nationalities.

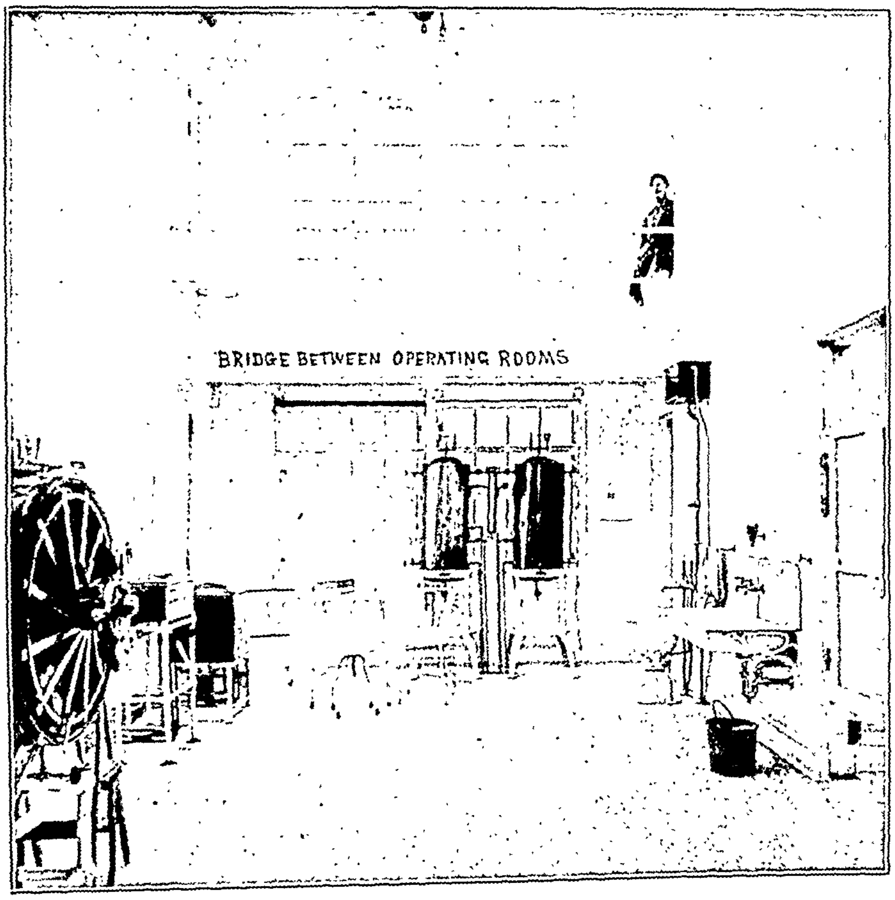


Fig. 6.—Sterilizing and instrument-room between the two operating-rooms showing the high bridge by which visitors can pass quietly from one room to the other without conflicting in any way with the operating-room personnel.

470 Jackson Street.

What a High Infant Mortality Means.—A high infant mortality-rate is of grave moment not only on account of the pain, suffering, worry and economic loss it entails, but particularly because it is an evidence of the antenatal and postnatal environments to which those that survive are also exposed. The physical resistance and mental capacity of childhood, the moral stamina of adolescents, are directly influenced by the health and nutrition of the first two years of life. If we believe that the most valuable asset of this community is the health and character of its youth, we cannot longer question the urgency of making the conservation of infant life a special function of our municipality in a department of child hygiene in the city, county or state.—Julius Levy in Report of the Public Welfare Committee of Essex County, N. J.

FRACTURE AND ORTHOPEDIC TABLE*

GEORGE W. HAWLEY, M.D.
BRIDGEPORT, CONN.

This table has been designed to provide for the suspension and immobilization of the lower extremities and trunk, without moving or lifting the patient in any way, and to afford reliable support and traction of the lower limbs in the treatment of fractures.

As the illustrations show, this table (Fig. 1) has a flat top, in the center of which is placed a hip-rest, *D*, set practically flush with the surface of the table. The top is made in two sections. The smaller one, *A*, for the support of the head and chest, is mounted on four small wheels, so that it can be moved along the bars, *C*. The longer section, *B*, rests on four short legs, which act as levers so that it can be lowered, leaving Section *A* and the hip-rest projecting (Fig.2). A slot cut in the center of Section *B* provides for the passage of the hip-rest post through the folding top. Hanging downward from the foot of the table is a lever, *F*, which automatically locks the top when it is up. Pressing upward on this lever releases the lock. Close to this lever is a handle, *H*, by which the top is lowered and raised. The hip-rest is fitted with two perineal traction posts, a short one, *I*, and a longer one, *L*, with swinging arms from which a sling can be hung to support the knee or thigh and prevent sagging (Fig. 3). To the sides of the table frame are attached extension bars, *J* (Fig. 3), which can be placed at any degree of abduction. On the bars are foot-pieces to which the feet can be bandaged and traction applied.

It will be seen that this table is simple in principle and in construction. There are no gears, cranks or other complicated parts. Its operation requires no practice or instruction. The patient is placed on the table as for any operation or manipulation of the lower extremity requiring immobilization. After the manipulative or operative work has been completed, the legs are placed in the desired position and held there, either by assistants or by the extension foot-pieces (with or without traction). The top is then lowered, leaving the patient securely suspended in convenient position for immobilization in plaster of Paris. It is only necessary before lowering the top to see that the patient rests properly on the hip-rest and head-rest. The latter, being movable, can be adjusted to suit different subjects. After the plaster has been applied the top is raised again to its original position. The feet may be fastened to the traction apparatus, if it is desired, for the purpose of steadying the legs or procuring extension.

USES AND ADVANTAGES

The uses to which this table is fitted are:

The application of plaster of Paris in the treatment of joint diseases, etc.

The treatment of fractures of the lower extremity by the closed or open methods as a means of obtaining strong, uniform traction, maintaining reduction and preventing displacement.

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* Presented at the New York Academy of Medicine, Orthopedic Section, April 18, 1913.

The operation of joint resection, osteotomy, osteoplasty, etc.

Whitman's abduction treatment of fracture of the neck of the femur.

The application of plaster jackets (Fig. 4).

Its advantages are:

Its simplicity.

The flat top, which is serviceable for almost any kind of work.

The doing away with lifting patients on a hip-rest, which is awkward and difficult to do without disturbing the position of the extremities, releasing traction and displacing the bones.

The elimination of much of the assistance usually required to handle these cases.

The facts that the legs can be accurately placed, maintained and immobilized in a given position without moving them in the least; that in place of unsteady, manual pull, reliable and uniform traction can be had; that it makes a general orthopedic table because it is serviceable for a variety of plaster work.

An experience of several weeks has already demonstrated the practical usefulness of this table. Besides the routine application of hip spica and jackets, I have used it in one case of bone plating of the femur, in which, by the use of the extension apparatus, it made the work of approximation and retention of the fragments much easier, and eliminated the strain on the plate from the time it was inserted until the limb was encased in plaster. In three cases of fresh fracture of the shaft of the femur, which were put up at once under ether, it has been possible, not only to obtain excellent reduction and overcome the overriding, but to get overextension of from one-half to three-quarters of an inch—to stretch the muscles and prevent retraction, as advocated by Martin.

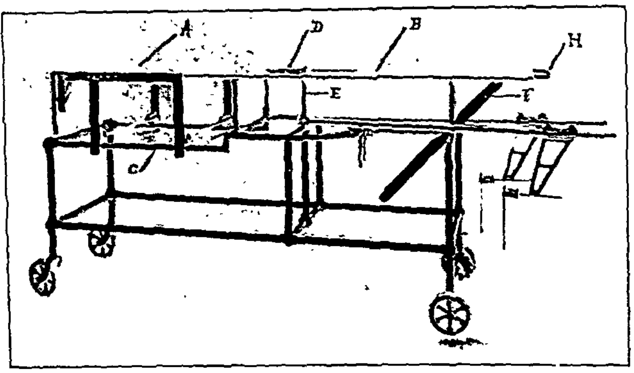

Fig. 1.—Table showing flat top made in two sections, *A* and *B*. Section *A*, the head-rest, is mounted on small wheels which rest on the runners *C*. Section *B* is supported on four short folding legs. The hip-rest, *D*, on the post *E* projects through a slot cut in the top. The lever *F* locks Section *B* in the position shown. By lifting this lever Section *B* can be folded down on the frame, as in Figure 2.

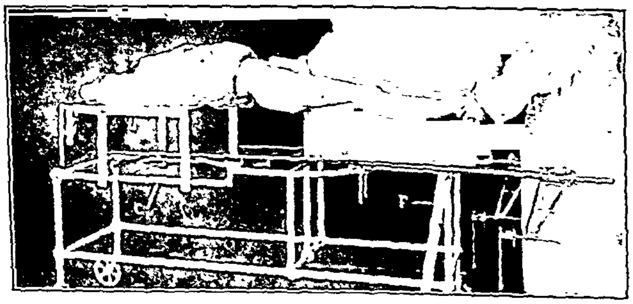

Fig. 2.—Patient on table after top has been lowered. The distance between hip-rest and head-rest can be regulated by sliding the latter along the runners *C*. After plaster of Paris has been applied section *B* is raised again, as in Figures 1 and 3. Two sizes of sacral supports are used, one for adults and one for children. Perineal post indicated by letter *I*.

At the present time I am having an attachment made so that the same support and traction can be applied to the upper extremity. A portable apparatus, similar in principle to the table, which can be set up on a bed or table, is also under construction.

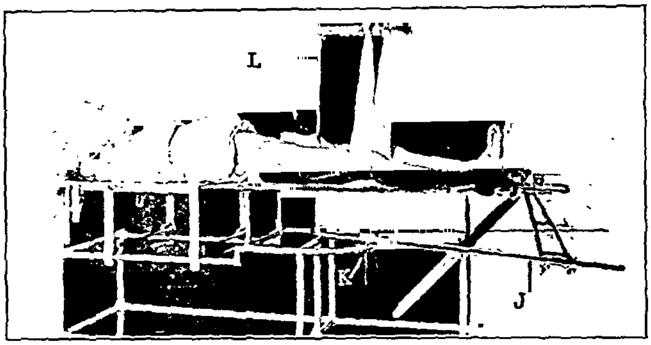

Fig. 3.—Patient on table with extension apparatus bandaged to feet. These extension bars can be adjusted to any degree of abduction and secured by a device at *K*. The perineal post *L* has swinging arms for suspension of thigh or knee. After the legs have been placed and secured as desired, the top is lowered, leg immobilized, and top again lifted to its original position. A peculiar method of bandaging the feet has been devised which holds the heel firmly against the foot-plate and keeps the foot at right-angled flexion The foot is released from plaster by lifting out the foot plate without cutting the plaster in any way. The extension apparatus provides for traction up to 250 pounds.

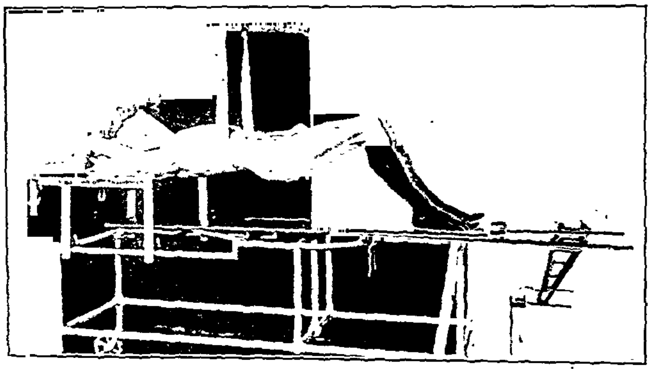

Fig. 4.—Patient in position for application of plaster jacket. Hyperextension of the spine, after the method of Roberts, can be had by raising the sling.

871 Park Avenue.

Water-Supply in Alaska.—The towns along the southern coast are usually supplied with excellent spring-water which is piped into the houses, while rain and seepage water is used by natives in the villages. In Cook Inlet a number of the settlements have shallow wells which are fairly well protected. On the Yukon the river-water is used for domestic purposes; in winter this is obtained through a hole in the ice. On the Bering Sea both St. Michael and Nome are supplied with spring-water which is piped into the town during four months of the year, while the remainder of the year it has to be hauled from these springs and distributed to the dwellings in buckets. Along the Arctic coast either rain-water or river-water is used in the summer, and melted snow and ice in winter. It spite of the favorable conditions present for contamination of the water-supply, there are no water-borne diseases in Alaska. The few cases of typhoid that have been reported in the territory have been imported into the country from the outside.—E. Krulish, *Pub. Health Rep.*

PROGNOSIS AND THERAPY OF CEREBRAL SYPHILIS *

GEORGE S. SCHWINN, M.D.
First Assistant Physician, Government Hospital for the Insane
WASHINGTON, D. C.

The prognosis of cerebral syphilis depends on a prompt diagnosis, for the earlier a case comes under observation the easier it is to effect a cure. In many of our cases of cerebral syphilis we hope for recovery or, at any rate, such a degree of recovery as will enable the patient to resume his occupation and lead a useful life. This prognosis is quite justifiable, for it is astonishing how much improvement sometimes occurs under proper treatment, even in comparatively hopeless cases. Power and Murphy[1] say, "There can be no question of the beneficial influence of early treatment;" and all writers agree on this point. Fournier, Lang, Oppenheim, Hjellman, Max Nonne and others believe that nervous affections are more likely to occur when treatment has either been insufficient or not practiced at all.

Recovery can be expected only so long as specific changes in the tissues are the sole ones present, the atrophy of the cranial nerves produced by compression and the softening due to occlusion of the arteries not being developed. If the general cerebral symptoms are accompanied only by signs of gummatous neuritis, complete recovery may take place. It may often be shown to have done so by the condition of the eyes, although some defect may be left behind. Thus, optic neuritis or choked disk may completely pass away, while marked atrophy may remain. The most responsive to treatment are cases of meningitis, cerebral or spinal, or cerebrospinal syphilis, provided the symptoms point to irritation rather than paralysis; if there be associated monoplegia or hemiplegia, aphasia, apraxia, alexia or hemianopsia, even though these conditions be transitory, the prognosis is serious, for they indicate arterial disease, which is less susceptible to treatment than the meningitis.

A meningitis of the base with paralysis of one or more of the cranial nerves will yield to treatment; if the optic chiasma and optic nerves are involved there is a danger of postneuritic atrophy followed by partial or total blindness. Still this condition of basic gummatous meningitis is not so serious if it is taken early before the arteries are affected by endarteritis. Treatment should produce a rapid improvement of the symptoms. The cases of cerebral syphilis with mental symptoms, convulsions, lapses of consciousness and drowsy stupor are generally most serious; permanent improvement is infrequent and complete recovery rare. The most unfavorable are those which simulate general paralysis, for it indicates a wide-spread syphilitic meningitis of the convexity. Likewise, cases which indicate softening from arterial occlusion are most unfavorable; probably endarteritis is the most dangerous and most insidious of all forms of cerebral syphilis, but even vascular affections have been cured by antisyphilitic treatment. Advanced disease may occur without producing any very definite symptoms, perhaps persistent headache only, perhaps transitory aphasia, monoplegias or hemiplegias following a faint or fit; if such a case is treated at once the prognosis is much better than later, when the loss of function has become permanent, for this denotes tissue necrosis, and little good can be done toward curing a hemiplegia when contracture has occurred. Too often, owing to a lack of understanding of the pathologic process, a favorable prognosis is given in such a case because it is of syphilitic origin. Nervous tissue once destroyed cannot be replaced. Many cases show that brain syphilis follows on a brain injury. These cases generally respond well to treatment; probably the injury causes a local node or gumma.

Pure basic meningitis or participation of a cranial nerve, the motor oculi, for example, does not indicate a bad prognosis, rather the reverse, for it brings a patient early under treatment. Markedly choked disk may disappear and restoration of sight may be complete under treatment. Progressive neuritic atrophy generally ends in blindness. Basic meningitis is much more favorable when limited to one side; it is frequently, however, associated with arteritis; the prognosis then is bad because occlusion of arteries at the base of the brain may occur and a very small patch of softening in the pons or medulla may lead to serious paralysis and fatal complications. Acute bulbar symptoms are always serious, but when they occur in the secondary stage vigorous treatment may sometimes be followed by very satisfactory results. The most successful cases are those which point to a local gummatous pachymeningitis—cases in which there are no symptoms of loss of function, only headache, localized pain and tenderness, and cortical irritation causing jacksonian epilepsy. Pseudobulbar symptoms are always serious, as they imply that both hemispheres are affected and they indicate a widespread arterial affection with bilateral capsular or cortical softening. Occasionally there may be sudden death from apoplexy due to rupture of a cerebral vessel or thrombosis of the basilar artery. Antisyphilitic remedies have little influence on symptomatic epilepsy when once it has become established. A guarded prognosis should always be given in all cases of syphilis of the nervous system. According to Naunyn only after five years of complete freedom from symptoms can it be asserted that a cure has been effected without any likelihood of further symptoms arising. When we have reason to suppose that the disease is a localized pachymeningitis and the symptoms have disappeared, we can give usually a favorable prognosis. The examination of the cerebrospinal fluid for lymphocytes and the fluid and blood by Wassermann reaction may help much in giving a prognosis, while it may also afford information as to the beneficial influence of the treatment. The lymphocytes may entirely disappear from the cerebrospinal fluid for a time under the influence of treatment, and then there may be a reappearance, just as there may be a fresh eruption on the skin.

In many cases of cerebral syphilis, even when there has been systematic treatment, the patients are only incompletely cured; the incompleteness of the cure is shown not merely by the fact that the patient is left with mental enfeeblement or some degree of paresis or paralysis, but also by the fact that, after months or years, quite suddenly convulsive seizures or psychic troubles may reappear. These recurrences are of evil omen; as a rule, specific treatment has far less influence than in former attacks. A progressive dementia and attacks of drowsy stupors indicate extensive disease and the prognosis is always very grave.

The prognosis runs parallel with the duration and treatment of the nerve affection, and we must consider these two points as the most important for prognostic valuation, beside which the rest fall into the background.

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* Read before the Society for Nervous and Mental Diseases of Washington, D. C., at a Symposium on Syphilis of the Central Nervous System held March 20, 1913.

[1] Power, D'Arcy, and Murphy, J. Keogh: A System of Syphilis, 1910.

There is no apparent difference in the effects of sex and age with regard to the prognosis.

Finger,[2] in his report of 170 cases of syphilis treated with salvarsan, reported seven cases showing affections of the optic and auditory nerves coming on at periods varying from a few hours to months after treatment. He considered them examples of a neurotropic action of the drug. Mucha, in a later communication, reported thirty-seven similar cases. The contentions of Finger immediately aroused wide-spread discussion, and in the past year a very large number of these cases of affections of the cranial nerves after salvarsan have been reported. Ehrlich,[3] from the beginning, held that these affections of the cranial nerves were due, not to a toxic action of salvarsan, but to a syphilitic meningitis developing from foci of spirochetes in the central nervous system which had not been reached by salvarsan. He gave this form of relapse the name *Neurorecidiv*, or nervous relapse, and considered that the increased frequency of such relapses was due merely to a closer observation and, therefore, more frequent recognition.

The best therapy of the nervous relapse consists in its prophylaxis. This should naturally begin with the treatment of the primary affection. The primary stage offers very little, if any, chance of danger for the later outbreak of the nervous relapse. The views of the most prominent students of syphilis now agree that the primary affection should be treated with great energy and all means at one's disposal, without awaiting the outbreak of secondary symptoms. Numerous cases which received preventive treatment and have for months remained free, not only from any nervous relapse but also from all relapses, while the Wassermann reaction in the blood was constantly negative, give us complete proof that a thorough therapy in the primary stage succeeds in carrying into effect a *therapia sterilisans magna*. Similar demands, perhaps even to a greater degree, are made by the early secondary stage which, as has been seen, is especially dangerous in the nervous relapse. That the salvarsan treatment as heretofore used did not fulfil the demands of an energetic treatment has frequently been said and proved by the experiences of Bayet, Desneux and Dujardin, who made intravenous injections of much larger doses at brief intervals, but were not satisfied with the disappearance of the manifest symptoms, looking on the constant negativism of the Wassermann reaction as the goal of their therapeutic exertions. According to experiences at hand repetitions of intravenous injections of increased doses seem to be without danger, for the sometimes threatening side effects which followed the intravenous injection and were formerly looked on as toxic symptoms have been proved due to some other sources than the effect of salvarsan. It is Wechselmann's merit to have discovered and emphasized that common distilled water contains a quantity of germs, which, it is true, are killed by subsequent sterilization, but the incorporation of these dead bacteria into the organism through intravenous injection causes in it a protein poisoning which is evidenced by vomiting, diarrhea, chills and fever. Wechselmann observed none of these symptoms after he used water freshly distilled just before the injection. Hüfler, Herbsmann, Marshalko and Galewski confirmed Wechselmann's theory. It is therefore absolutely necessary, in order to avoid these secondary effects, to use only water freshly distilled for the intravenous injection. But the elimination of these side-effects is not only of immeasurable importance for the momentary health; it has, according to Ehrlich's[3] view, other no less important consequences. The reaction which frequently followed former intravenous injections caused a reversal in the pharmacodynamic qualities of the salvarsan introduced into the body. Its spirillotropic power decreased, while its organotropic power increased. In this way the therapeutic action on the one hand is lessened, while on the other the organism is more affected and rendered more susceptible to subsequent injections. The avoidance of Ehrlich's so-called "water-error" is, therefore, the *petitio principii* of a rational intravenous salvarsan therapy. The lasting results of the future must show whether this alone is to be employed in increasing doses, or whether it is to be used in combination with mercury preparations as Hoffmann, Neisser, Gennerich, Kromayer, Toulon, Löwenberg and many others have recommended and done. Even before the salvarsan epoch Ehrlich recommended a combination therapy for trypanosome diseases and only lately he thus explained his reasons for this recommendation:

> In order to weaken the parasites as much as possible the treatment with two remedies simultaneously instead of only one, is to be recommended. . . . The combination therapy, however, has another advantage, namely, it prevents the imperviousness of the spirochetes to any one drug. . . . The combination therapy is, at the same time, the transition to the question whether it is possible in any manner to meet the genesis of this imperviousness. The difficulty of deciding this question has been pointed out by experiments on animals. In Minkousky's clinic at Breslau it was observed that a case of malaria tertiana was no longer influenced by quinin, a treatment with small doses of salvarsan after a few weeks caused the fever to vanish. When the fever reappeared it was seen that it might be influenced in the most beneficial manner by quinin. It would therefore seem as if the interpolated salvarsan injections had destroyed the imperviousness of the parasites to quinin. Such observations have been extremely frequent in the therapy of syphilis within the last year. Cases which could no longer be influenced by mercury promptly yielded to it after an intermediary treatment of salvarsan. insufficient for sterilization. We may therefore hope that it will be possible to destroy an existing imperviousness of the parasites to some definite chemical by treatment with another or perhaps to prevent the genesis of such imperviousness by a simultaneous combination treatment.

In practice this combination therapy may naturally be carried out with many variations. Gennerich, for example, gave some calomel injections before the salvarsan injections. Arning proceeds in the following manner: He follows an intravenous injection of 0.4 to 0.6 gm. after six days by an acid intramuscular deposit of 0.6 gm. and then adds an energetic inunction treatment. In this way he succeeds in eliminating the disease in cases in their primary stage, and in preventing nervous relapses for a long time in secondary cases. Fabry's process is to give an intravenous injection of from 0.4 to 0.5 gm. and immediately afterward 0.1 gm. mercuric salicylate intramuscularly. After three days this dose is repeated, then followed by six mercuric salicylate injections with the patient ambulant; so that altogether from 0.8 to 1.0 gm. salvarsan and 0.8 gm. mercuric salicylate are administered. Further study alone can show which method should be chosen. Fabry himself observed no more nervous relapses since the introduction of this therapeutic treatment.

The treatment of the nervous relapse itself must, in like manner, answer the demands for powerful treatment, to which we must add rapidity of interference,

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2. Finger: Wien. klin. Wchnschr., xxiii, 1910.
3. Ehrlich: München. med. Wchnschr., lviii, 1911.

As we have seen, the acute stage of the nervous relapse is often preceded by weeks of prodromal symptoms of the most varied kinds. Headache is the most marked characteristic of this period. A long-continued headache which shows the qualities we have learned to know from the symptomatology demands the closest attention on the part of the physician and requires the immediate inauguration of a specific therapy just as much as the other alarm symptoms—vertigo and roaring in the ears. The admonition of Charcot to "strike quick and hard" must be obeyed and no time wasted in symptomatic treatment. But at this stage of the prodromes it will perhaps be more practical not to carry out the axiom "strike hard," by administering large doses, but to gain an aggregate effect by more frequent intravenous injections of small doses. Sicard, Bizard and Gudman have lately mentioned a case very instructive in this regard:

A man, 39 years old, had a primary affection in February, 1911, which was not treated and was followed in April by a severe papular exanthem. April 15 he was given 0.4 gm. salvarsan by intravenous injection. Two days later, headache, vertigo and roaring in the ears set in, which continued up to May 6 and were thought to be due to syphilis, for which reason the patient on that day was given another intravenous injection of 0.5 gm. salvarsan. From the next day on the headache, vertigo and roaring in the ears increased and six or seven days after the second injection there developed, in about sixty hours, paresis of the acusticus, facialis and oculomotorius and a double neuritis optica with marked disturbance of sight. From May 6 to June 14 the patient remained without treatment, but again entered the hospital on the latter date. The Wassermann reaction in the blood and fluid was strongly positive, the cerebrospinal fluid very cloudy under high pressure; there was extraordinarily marked lymphocytosis; eosinophilous cells very numerous—6 per cent. Spirochetes could not be found. The treatment was now administered in the following manner: Twice a week, 0.1 gm. salvarsan by intravenous injection; on the intervening days intramuscular injections of 0.02 gm. mercuric benzoate daily, 2 gm. potassium iodid by mouth. The patient thus received in three weeks seven intravenous salvarsan injections, the first five 0.1 gm. each, the last two 0.3 gm., 0.24 mercuric benzoate in twelve injections and 30 gm. potassium iodid. Under the influence of these three medicines the symptoms rapidly retrograded to a slight ptosis and rigidity of both pupils. The cerebrospinal fluid became clear, but still contained very many lymphocytes. The Wassermann reaction in the blood and fluid was still positive.

The authors decided from the course of the disease in this case that whenever there are alarming symptoms, long-continued headache, vertigo and roaring in the ears, small doses of salvarsan administered twice a week for several weeks in connection with mercury and iodin should be substituted for the intensive treatment.

This manner of procedure should be especially used for older persons and such individuals as show any deterioration of the vascular system, alcoholism or nicotin abuse.

The acute nervous relapse, however, demands the greatest measure of rapidity and intensity of treatment. Here any omission of a quickly inaugurated therapy may lead to irreparable changes in so important an organ as the central nervous system. From statistics we see that just those cases in which a quickly inaugurated treatment was neglected showed no amelioration or cure. Affections of the acusticus are especially pressing in their demands, as, according to the unanimous view of otologists, this nerve is especially liable to degenerate rapidly. The treatment regimen of the nervous relapse will have to be governed by the same maxims which we have before explained. Besides the somatic conditions the anamnestic antecedents are of the greatest importance; patients who have in earlier life passed through any brain affection, as for example meningitic phenomena or brain symptoms subsequent to a head trauma, need closer observation. The mode of life and the actions of the patient after the injections are likewise to be regulated most carefully. Naunyn demands that even inunction cures of brain syphilitics should be taken with complete rest in bed. This rule must be observed all the more after salvarsan injections if severe subsequent phenomena, such as Mann lately described, are to be avoided. Not only every alcohol excess but even all use of alcohol is to be strictly forbidden.

In cases with prodromal symptoms and pronounced nervous relapse it is advantageous to use iodin in the form of potassium iodid with the salvarsan and mercury; in fact, if it can be borne the potassium iodid should be administered in not too small and increasing doses, up to 6.8 gm., or even 10 gm. daily. Great attention should also be bestowed by a regulation of the diet on the metabolism and the functions of the liver and kidney.

The efficiency of the modern treatment of lues is attested by hundreds of experienced observers all over the world; since its introduction several modifications in the technic have taken place. Subcutaneous and intramuscular injections have entirely given way to the intravenous method. By some the muscular injections are considered the more efficacious.

In syphilis of the nervous system the administration of salvarsan should be undertaken only with the full knowledge of the possible effects. That great prudence must be exercised was taught by the accidents which occurred during the trial period of the drug in patients with advanced disease of the nervous system. Professor Ehrlich is of the opinion that the former dreaded reactions in late lues of the nervous system are to be referred entirely to faulty technic and the use of old water containing the proteid products of dead organisms. Dreyfuse has treated hundreds of cases of late nerve syphilis without any reaction whatever, except in a single instance in which a spinal puncture had been made just prior to the salvarsan injection. In this patient the puncture was followed by meningeal manifestations lasting several days. When the injection was delayed until such symptoms had subsided, absolutely no by-effects were noted. In syphilis of the brain the possibility of the development of the Herxheimer reaction should always be kept in mind. Although we have no pathologic findings in such cases, the occurrence of convulsions and localized paralyses after the administration of the drug points to an intensification of the inflammatory process about certain focal brain lesions, which in the majority of cases is only transient. In cases in which the remedy is indicated it should be given cautiously in small repeated doses or preceded by several injections of mercury. In this way a gradual effect on the lesion is produced and we avoid a too rapid dissolution with dangerous consequences.

In cases of meningitis or involvement of the cerebrospinal system the patient's susceptibility should be cautiously tested with small doses. Owing to its less irritable properties neosalvarsan lends itself more readily to intramuscular use. For this purpose 0.9 gm. dissolved in about 30 c.c. of water is used. Schreiber has observed edema after its use, but never infiltration or necrosis. He prefers, however, the intravenous method. Two weeks after treatment the Wassermann reaction is to be taken and, if negative, is to be repeated at monthly intervals. If it becomes positive, an intensive course of mercury is to be inaugurated, followed by two more injections of neosalvarsan. If it is still positive two weeks after the first series of injections, the preceding plan is to be put into immediate effect. Serologic observations for at least a year after the first negative reaction has been obtained should be insisted on and carried out.

Gennerich employs the more intensive combination therapy from the beginning and controls his cases by means of provocative treatment or the biologic reactivation of the Wassermann reaction. Both Gennerich and Miliau found that if patients were injected with 0.3 gm. of the remedy six months or a year after a supposed cure and their blood examined every day thereafter for two weeks a transient reaction was procured if any evidence of the infection was left, while it remained negative if cure was absolute.

The treatment of syphilis consists no longer in the control of the symptoms, but should be undertaken with a full appreciation of the serious nature of the infection. It should be undertaken with a thorough understanding of what is to be accomplished with the remedies employed. The amount of treatment in lues can not be arbitrarily fixed, as the infection varies within wide limits in different individuals. In some its course is so mild that it is possible to eradicate it with a minimum amount of drugs, while in others—and they are in the majority—it persists with treatment increased many fold.

Benario[4] says that the time over which our observations extend is as yet too short, in comparison with that, for example, which Naunyn has used as the basis of the prognostic valuation of his cases. Naunyn in his statistics considers only those patients cured who remain free from relapses for five years after the cerebral affection. Benario records 83 per cent. of recoveries and 8 per cent. ameliorations—together 91 per cent., which far outstrips the numbers given by Naunyn and Nonne. In the majority of his cases a series of months—almost a year—has passed in which the cure lasted, so that the hope exists that it will be permanent. The high percentage of cures is no doubt due to the fact that the affections, as soon as they appeared, were put under immediate and thorough treatment.

Government Hospital for Insane.

THE CUTANEOUS REACTION IN SYPHILIS

SECOND REPORT

JULIAN MAST WOLFSOHN, M.S., M.D.
Assistant in Neurology, Stanford University Medical Department
SAN FRANCISCO

So uniform have been the published results on the specificity of the luetin reaction (Noguchi) in syphilis that it now remains for the clinicians to accumulate larger numbers of tests on syphilitic cases in order to ascertain wherein the luetin test is of the greatest and also of least value. In a former publication, the importance of the luetin reaction in the later stages of syphilis was demonstrated on a small number of cases. The present report is based on one hundred cases of syphilis, and aside from a few details confirms what has been done previously by myself and others.

Parallel with this work, there have recently appeared the observations of Fischer and Klausner who have prepared a sodium chlorid solution extract of fresh tissue from the lungs of children dead of pneumonia alba. The technic employed in the luetin reaction was closely followed by these authors. They found not only that their extract was specific for syphilis, but also that it was most useful in the late hereditary and in the tertiary stages; in the primary and secondary stages the reaction was uniformly absent. It is of interest to note that twenty cases of progressive paralysis all reacted negatively. While this preparation may be made more easily than the luetin, the latter has several important advantages, among which may be named:

1. Pure cultures of many separate strains of spirochete are alone employed.
2. The metabolic products only and no tissue extracts are present in the final product.

The same precautions and technic described in my previous paper have been rigidly followed in this series, which comprises 158 cases, 100 of which were syphilitic and 58 were used as controls.

It is only after many inoculations have been done that any reliability as to the technic and interpretations of the reactions can be placed. For example, many patients who were inoculated presented what at first sight appeared as positive reactions, but which on closer inspection were only areas more or less inflamed, but with no infiltration whatever. This type of reaction rapidly subsides and within seventy-two hours has disappeared.

At the Presidio General Hospital in San Francisco, Major Brooks, who has had considerable experience with the luetin reaction, says in an unpublished communication: "Our experience with the luetin at this hospital has been particularly gratifying, especially in the tertiary cases associated with a negative Wassermann reaction."

In general, the types of reaction, that is, the papular, vesicular, pustular and torpid forms, were found to be the same as previously described. To this may be added a fifth, the hemorrhagic variety, which was found in two cases only. Each patient presenting this type of reaction was suffering from myocardial insufficiency primarily due to a syphilitic cardiopathy. The reaction was delayed till the third to the fifth week, when a hemorrhage pustule formed, discharged and dried up, but which recurred four to six weeks later and discharged a hemorrhagic material. In both cases the contents of the pustule were sterile for the ordinary pyogenic organisms. Little pain or swelling was complained of in those cases. The reaction over the control site of injection or *Umstimmung* was present in a fair percentage of cases.

CONTROL CASES

The fifty-eight patients in the control series included medical, dermatologic and neurologic cases such as senile dementia, gastric ulcer, psoriasis, eczema, etc. Only two of these reacted suggestively. Over both the luetin and control sites slight inflammatory induration was made out at the end of forty-eight hours, which practically had disappeared before ninety-six hours.

This type of reaction, to one inexperienced in reading the tests, might give rise to some uncertainty in their interpretation; but when one has studied a large number of these reactions, no difficulty should be encountered if reading is delayed until the fourth to the sixth day. In these suggestive cases it is well to repeat the tests.

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[4] Benario: Ueber Neurorecidiv, Munich, 1911.

In both the cases cited the patients were reinoculated with the luetin; the reaction proved to be unquestionably negative.

SYPHILITIC CASES

One hundred cases of syphilis were tested in this series including eight congenital, one primary, five secondary, twenty-six tertiary, seventeen latent and forty-three parasyphilitic.

Congenital Syphilis.—The ages of the eight patients in this group ranged between 5 months and 5 years. Wassermann reaction in each instance was positive after salvarsan had been administered at least once and in one case twice. The luetin reaction was positive in six patients, or 75 per cent. of the treated cases. One child 5 months of age was inoculated the day the salvarsan was given, and she reacted negatively. A reaction over the site of injection of the control solution (*Umstimmung*) did not appear in any case. The reactions appeared about the third day and subsided quickly without much general or local disturbance.

TABLE SHOWING RESULT OF WASSERMANN AND LUETIN REACTIONS

Stage of Syphilis	No. Cases	Wassermann					Luetin			"Umstimmung" at Control Site		Delayed Reaction, Day
		Blood			Cerebrosp. Fl.							
		Positive		Negative	Positive	Negative	Positive		Neg.	Pos..	Neg.	
		No.	%	No.	No.	No.	No.	%	No.	No.	No.	
Congenital	8	8	100	0	*	*	6	75	2	0	8	0
Primary	1	0	0	1	*	*	0	0	1	0	0	0
Secondary	5	5	100	0	*	*	3	60	2	1	4	0
Tertiary	26	21	80	5	2	9	25	96	1	17	9	2-12
Latent	17	11	64+	6	1	5	17	100	0	12	5	....
Parasyphilis	43	..	...	..	..	..	..	...	..	..	..	....
A. Cardiovascular	25	16	64	9	*	*	22	88	3	14	9	2-20
B. Central nervous system	18	..	...	..	..	..	..	...	..	..	..	....
Tabes dorsalis	14	8	57	6	3	11	13	92	1	9	5	1-6
Taboparesis	2	2	100	0	2	0	2	100	0	2	0	0
Optic atrophy	2	2	100	0	0	2	2	100	0	2	0	0
Non-syphilitic cases	58	0	0	48	0	6	0	0	58	0	58	0
Total	158	..	...	..	..	..	..	...	..	..	..	....

* Not done.

Primary Syphilis.—One case only was tested; the chancre had appeared four days before and *Spirochaetae pallidae* were shown present by the dark-field illumination. Both the Wassermann and the luetin reactions were negative.

Secondary Syphilis.—The Wassermann test was positive in the five cases of secondary syphilis tested. Only three of these reacted positively to the luetin. Each of the three patients had been given one dose of salvarsan previously and the cutaneous manifestations had faded to a fair degree. Only one patient reacted violently, but no constitutional symptoms were noted. Thus it appears that treated secondary syphilitics are apt to react to the luetin proportionately to the amount of treatment.

Tertiary Syphilis.—Twenty-six cases of tertiary syphilis are included in this series. Twenty-one of these gave positive Wassermann reactions in the blood-serum, and only two of eleven in the cerebrospinal fluid tested. Four of the five patients reacting negatively to the Wassermann were being or had been treated with antiluetic medication for varying periods. This type of case, presenting the outspoken or suspicious syphilitic lesions in which the Wassermann reaction is continuously negative, is one in which the luetin reaction will be of immense value. Major Brooks' opinion that "in this reagent we have a valuable adjunct in making a diagnosis of syphilis" is shared by all who have had experience with Noguchi's luetin. The luetin reaction was positive in twenty-five of the tertiary cases, or 96 per cent. One case giving a triple-plus Wassermann test reacted negatively to the luetin. This case was one of multiple gummata easily recognizable clinically as syphilitic. One would hardly expect such a reaction to be positive in this case if the presence of the luetin reaction is dependent on an allergic state of the individual. Reaction over the control site (*Umstimmung*) was present seventeen times. Two reactions did not become positive until the twelfth day. These delayed reactions were very mild.

Latent Syphilis.—The Wassermann test in latent syphilis is, aside from the examination of the cerebrospinal fluid, the only criterion for a positive diagnosis. In a recent article, Craig found that in 778 cases of latent syphilis, only 65.4 per cent. gave positive Wassermann tests. Of the sixteen cases of latent syphilis inoculated, eleven gave positive Wassermann reactions for the blood-serum, and only one out of six for the cerebrospinal fluid.

In striking contrast to this, sixteen, or 100 per cent., reacted positively to the luetin test. Twelve of these showed reactions in the control site (*Umstimmung*). No delayed reactions were noted.

Parasyphilis.—The patients in this group numbered forty-three, divided between cardiovascular syphilis (twenty-five) and central nervous system syphilis (eighteen). The latter variety attracted particular attention because every case was receiving intensive arsenical or mercurial treatment at the time of the test. Sixteen, or 64 per cent., of the cardiovascular syphilitics gave positive Wassermann tests. Twenty-two, or 88 per cent., gave positive luetin tests. *Umstimmung* appeared fourteen times and two reactions were delayed till the twentieth day. As a rule a history of syphilis was given in these patients. Fourteen of the eighteen patients with central nervous system syphilis were tabetics in different stages: two had taboparesis and two showed optic atrophy. Positive Wassermann reactions were obtained in twelve, or

66 per cent., for the blood-serum, and 38 per cent. in cerebrospinal fluid. The luetin reaction was present in seventeen cases, or 94 per cent. One outspoken case of tabes dorsalis which had a negative Wassermann had a negative luetin test on two inoculations two months apart. Another tabetic gave a double-plus Wassermann test at the time of the first luetin injection, which was negative. This patient had had three doses of 0.6 gm. salvarsan. Two months later the second luetin inoculation gave a very typically positive reaction. One case of syphilitic myelitis presenting a Brown-Séquard syndrome gave positive Wassermann and violent luetin reactions and cleared up wonderfully under salvarsan.

ANOMALIES IN THE LUETIN REACTION

Four months after one syphilitic cardiac patient was inoculated there appeared at the site of the luetin injection a large hemorrhagic pustule which discharged its grumous contents and healed up, leaving a pigmented scar. There was no pain or redness attendant on this. No cause was ascribed to this manifestation.

It is also interesting to note that in one dermatologic case, in which syphilis was merely suspected, and which before inoculation gave a negative Wassermann test, after inoculation a positive Wassermann reaction was obtained. This is but an isolated instance, but it raises the question whether or not a positive Wassermann may be caused by the administration of luetin. Further observations on this subject will have to be made before any definite conclusions can be drawn.

CONSTITUTIONAL REACTIONS

In this series of one hundred cases there were but two general reactions and these merely took the form of swollen axillary lymph-nodes and slight tenderness of the upper arms. The infrequency of constitutional reactions may be explained by the fact that the luetin now employed is much purer and more concentrated than that previously distributed. The dose administered now is but 0.07 c.c. in contrast to the dose of from 0.1 to 0.12 c.c. used formerly.

CONCLUSIONS

1. The results of these observations, and also those of all previous workers with the luetin test, substantiate the specificity of the luetin reaction for syphilis when properly performed.
2. Intensive antisyphilitic treatment in the later stages of syphilis may produce a negative luetin reaction which, after an interval in which treatment is withdrawn, may become positive.
3. Treated congenital and secondary syphilis is apt to give positive luetin reactions.
4. The luetin reaction is especially valuable in parasyphilis, and tertiary and latent syphilis.
5. In any case of suspected syphilis, whether previously treated or not, a negative luetin reaction must be watched for at least four weeks so as not to overlook a delayed reaction.

I desire to express my sincere thanks to Prof. Llewellys F. Barker of the Johns Hopkins Hospital, who proposed this work to me and aided me in every way in it; also to Prof. R. L. Wilbur of the Stanford University Medical Department, who has placed the material of his clinic at my disposal, and to Dr. Harry Alderson, who has followed the dermatologic cases, and to Dr. H. Noguchi who has been so generous with the luetin.

2502 Fillmore Street.

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INTRAVENOUS INJECTIONS OF VARIOUS SUBSTANCES IN ANIMAL CANCER *

LEO LOEB, M.D., and M. S. FLEISHER, M.D.
ST. LOUIS

In continuation of our former work, we carried out a study of the action of two classes of substances on carcinoma in mice. First, we investigated the action of some inorganic substances; and, secondly, of various albuminous substances and also of a carbohydrate and a lipoid. We wish to give here briefly the result of our investigations.

Colloidal copper and colloidal platinum acted in a similar manner; both inhibited the growth of tumors during the time of injection. Colloidal sulphur, if active at all, is certainly not more active than either colloidal copper or platinum. On the other hand, easily ionized salts of copper and of lanthanum are without effect on cancer. Combinations of copper with proteid substances are active.

We also tested one organic substance which, according to Morgenroth, is very active in preventing pneumococcus infection, namely, ethylhydrocuprein. We found it without effect on cancer. Of the more complex organic substances we tested the following: various preparations of casein and of nucleoprotein; furthermore, serum globulin, horse-serum, egg-albumin, Witte's peptone protamin, gelatin, lecithin and starch. Of these various substances only the first two named, casein and nucleoprotein, were effective, while all other substances were entirely inactive. One single intravenous injection of either of these two substances destroyed, in a large number of cases, a great part of a tumor; while repeated intravenous injections prevented the growth of the tumor during the period of injection. After cessation of the injections the growth started again in the majority of cases, either immediately or after a period of latency.

The fact that another entirely different substance, namely, leech extract, also exerted a marked action on tumor growth similar to nucleoprotein and casein, but acting apparently somewhat more strongly than these latter two substances, seemed to us of great interest. We observed in a number of cases, after intravenous injection of leech extract, even a retrogression of the tumors, while one single injection caused a liquefaction and necrosis of a great part of the tumor. Also combinations of nucleoprotein and leech extract were effective.

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* From the Department of Pathology of the Barnard Free Skin and Cancer Hospital.

It seems, therefore, that of the various proteins, carbohydrates and lipoids which we tested so far, only the complex phosphorus-containing proteins are active. Of other substances we found leech extract active and among inorganic substances only colloidal metals.

Very young tumors, from two to six days old, do not seem to be as easily influenced as are those from nine to fourteen days old. Only intravenous injection was effective.

We also investigated the action of some of these substances on experimentally produced placentomas in the guinea-pig and rabbit. We found, usually, after one injection of casein, some hemorrhages and subsequent necrosis; colloidal copper seemed, so far, to be without any marked effect on placentomas. With Dr. Leighton we examined the effect of casein and of colloidal copper on wound-healing in white mice. The intravenous injection of these substances had no marked effect on the process of wound-healing.

In order to study still further the action of the substances we injected a series of normal guinea-pigs intravenously with the various solutions which we had tested in the case of tumors, and we found that one single injection of neucleoprotein, casein, and perhaps egg albumin protamin caused frequently multiple necroses of the liver. The necrotic areas were usually situated midway between the portal and central part of the acinus. Other substances, like gelatin and starch, have not so far caused necroses of the liver in our experience. We notice that *there is no absolute correspondence between the action of* the various substances on tumors and on the liver. In the guinea-pig some substances which are without effect on tumors cause necroses of the liver. Moreover, we have not been able to observe these necroses in the liver of the mouse, even after repeated injections of those substances.

We have been well aware of the fact that many guinea-pigs which have not previously been injected with those substances may show scattered areas of necrosis in various parts of the liver. The necroses which we find after the injection of the substances mentioned above seem, however, to differ in some respects from the necroses found in control guinea-pigs. We are investigating still further the question of how much of the necrosis found is to be attributed to the injection of those substances and how much is due to other causes. At present, therefore, we do not wish to make our statement *in regard to the causation of the necroses in the* guinea-pig a definite one.

We think it most probable that the various substances which we found active in cancer of the mouse change the capillaries primarily, increasing their permeability to the various constituents of the blood.

We reported previously that the intravenous injections of colloidal copper exerted a definite action on a number of human cancers, provided they had not been growing too rapidly. These injections of colloidal copper, as we also stated before, can, even in the most favorable cases, at present lead only to a partial retrogression of carcinoma in man. It is noteworthy that while some cases are affected favorably, other apparently similar cases are either affected unfavorably, or very little influenced by these injections. In further experiments carried out in conjunction with Drs. H. N. Lyon, C. B. McClurg and W. O. Sweek, we found that intravenous injections of solutions of casein also may exert a certain inhibiting action on the growth of some carcinomas in man; it is, however, less effective than colloidal copper. In one case of sarcoma of the humerus which we treated, injections of colloidal copper followed by injections of casein produced a decided retrogression and partial calcification of the tumor.

Although we have not so far noticed that the casein has any injurious effect in patients, our observations regarding the possible production of necrosis of the liver in the guinea-pig after intravenous injection of various proteins—observations which we first made in the latter part of March—seem to us to make the use of such proteins in the case of human beings inadvisable at present. We expect to publish a more complete report of our observations concerning the effect of colloidal copper and of casein in human cancer in the near future. There we shall discuss in detail the limitations and the various difficulties in this mode of treatment.

AN ARTIFICIAL AIRWAY FOR SURGICAL ANESTHESIA

ROBERT H. FERGUSON, A.M., M.D., Sc.D.
EAST ORANGE, N. J.

During the past eight months I have used Sir Frederick Hewitt's artificial airway in several anesthesias for which some special method for maintaining a free pharyngeal airway was imperative, and also, by way of experiment, in several cases in which the tongue gave no trouble whatever. It is an instrument of great value. The airway as made in England, however, is not adapted for use during anesthesia by open ether, which is the common method of anesthesia in the United States. Therefore I have essentially modified the instrument.

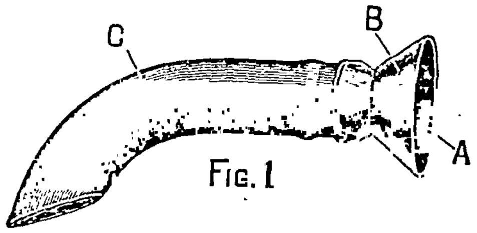


Fig. 1

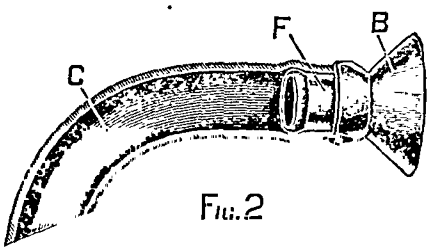


Fig. 2

Figs. 1 and 2.—Hewitt's artificial airway.

Hewitt's airway (Fig. 1) consists of a somewhat rigid rubber tube, *C,* curved so that when it is in position in the patient's mouth, it will conform to the upper aspect of the base of the tongue. It has its laryngeal end beveled to correspond with the opening into the larynx. At the proximal end a metal *funnel-shaped mouthpiece* is attached (Figs. 1 and 2, *B*). This has a deep groove so as to enable it to be clutched by the teeth in order to hold it in position.

Of the two forms of breathing, namely, that through the nose and that through the mouth, the latter is of greater value during anesthesia. The purpose of this airway is to establish and maintain oral respiration in cases in which it does not exist. The tube is introduced into the pharynx and respiration takes place through it.

For use with the closed method or with the semi-open (cone) method of anesthesia, Hewitt's airway is complete in itself and satisfactory. But for open ether I do not consider the instrument to be safe, at least if it is not in the hands of an expert anesthetist; and even with him an accident may happen.

When the airway is *in situ* and the patient is in a supine position with the occiput touching the table or the head turned a little to one side; or when he is in a semirecumbent posture, the funnel-shaped opening is uppermost. Now, if on account of a desire to watch the operation, the anesthetist should pour some ether onto the gauze of the inhaler, which he should never do; or if, because of carelessness or on account of an imperfectly working dropping device, the ether spurts or runs out of the container onto the gauze, then some ether would possibly find its way through the gauze into the funnel of the airway and thence by the rubber tube into the larynx and the lungs. Or, again, if too few layers of gauze are used on the mask, ether may inadvertently be dropped through the gauze down the airway. My first modification obviates this difficulty.

This new tube (Ferguson's modification of Sir Frederick Hewitt's airway, Figures 3 and 4), differs from its predecessor in having the proximal end of the funnel closed (Fig. 3, *D*) and two openings (one on each side of the truncated cone) for the ingress and egress of air (Figs. 3 and 4, *E*). Thus there can be no danger of dropping ether into the top of the funnel, because it is not open, and since the orifices are in the sides which slope toward the lumen of the tube, and therefore away from the source of dropping, it is almost impossible to get any ether into the tube. Should the patient's cheek be resting on the table, any ether that might enter the upper fenestra would pass across the funnel and out of the lower fenestra, so that it is almost impossible for any liquid ether to enter the airway, no matter what the position of the patient may be.

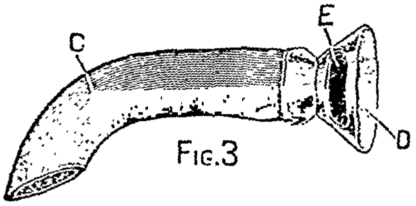


FIG. 3

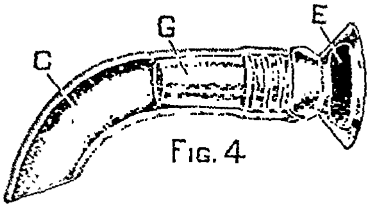


FIG. 4

Figs. 3 and 4.—Ferguson's modification of Hewitt's artificial airway. The detailed description is given in the text.

The second difficulty which I have overcome is independent of any particular method of anesthesia. I have had patients whose buccal cavities were so shallow that when the laryngeal end of the airway was in position the airway projected so far beyond the teeth that they could not grasp the metal end. Such patients would bite the rubber tube *C*, the walls of which would yield to the pressure and the tube become closed. I have lengthened and otherwise changed the metal thimble (Fig. 2, *F*), so that it extends well into the rubber tube *C* without enlarging the middle of the tube (Fig. 4, *G*). Consequently a patient's teeth may clutch the rubber tube *C* anywhere between *G* and the groove near *E* (Fig. 4), and the inside metal tube will resist the pressure, and the lumen of the airway remain open.

This airway should be introduced after surgical anesthesia has been reached. If the patient is not well under the anesthetic, the contact of the tube with the pharyngeal wall may incite gagging. To adjust the airway the jaws should be separated, the tongue brought gently forward and the airway passed back into the pharynx with the convex portion of the curved rubber tube nearest the roof of the mouth. The instrument of itself will then assume a proper position. As soon as the epiglottis and the base of the tongue are thus separated from the posterior wall of the pharynx, inspiration and expiration will take place through the airway, and the jaw or the tongue will not require attention.

This airway is of use in any anesthesia in which through muscular spasm or an improper position of the patient, the epiglottis and the base of the tongue are forced to approximate the pharyngeal wall, thereby embarrassing respiration. It is of especial value for patients with short or thick necks, and for certain very muscular subjects. It is valuable also for a patient in the Trendelenburg posture, for whom the necessary slight extension of the head cannot be maintained. In short, it is useful to do away with respiratory embarrassment due to any form of occlusion of the extrapharyngeal respiratory tract.

Two sizes of the airway are necessary, one for children and one for adults. The scale of the drawings accompanying this article is two-thirds the child's size, which is 3 inches long between parallels, and the rubber tube 9/16 inch outside diameter. The size for adults is 4 inches between parallels, and the rubber tube is ¾ inch outside diameter.

GASTRIC DILATATION

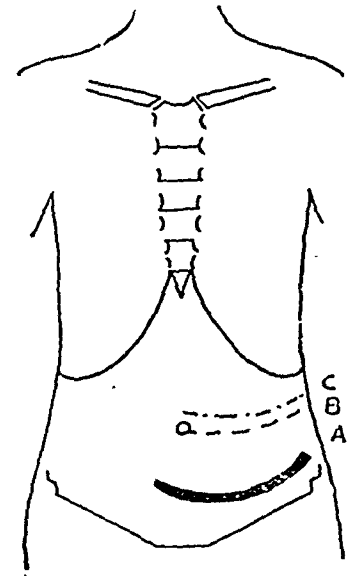
ITS TREATMENT BY REMOVAL OF GASTRIC CONTENTS, STARVATION, AND REST IN BED

ANDERS FRICK, M.D.
Attending Physician, Augustana Hospital
CHICAGO

We speak of gastric dilatation when we can demonstrate an enlargement of the stomach and an impairment of its motor function. It has been customary to distinguish between a dilatation of the first degree, or relative dilatation, by which we are supposed to understand a dilatation which exists only when the stomach contains food, and a dilatation of the second degree, or absolute dilatation, which remains even when the stomach is empty. This differentiation not only is of very slight practical value, but even becomes actually dangerous to the patient if it conveys to the physician the erroneous idea that a dilatation of the second degree is a sort of durable and stable condition which cannot be changed, and consequently leads either to inactivity on his part or to unnecessary surgical interference. On the contrary, the fact is—and the chief purpose of this paper is to call attention to this fact—that the contractility of the stomach is wonderfully well maintained no matter for how long a time or to what degree it has been dilated.

Our failure to take into consideration this latent contractility of a dilated stomach is no doubt the reason for the non-existence of a satisfactory and universally accepted method of treatment for gastrectasia. But as soon as we realize that the dilated stomach is capable of contracting to its normal size, our sole aim will naturally be to give it an opportunity to contract and put it at complete rest for that purpose. We may accomplish this without difficulty by evacuating the gastric contents, by starving the patient, and by keeping him in bed.

If the principle of this treatment is accepted as correct, the question of lavage in gastric dilatation will be greatly simplified. As the stomach-tube should be used for the sole purpose of keeping the stomach empty, it would be needless to discuss how often and at what time of the day lavage should be given. After the stomach-tube has once been used to remove the stagnant masses, if necessary in conjunction with lavage, it should not be introduced unless there is reason to suspect that fluid is gathering in the stomach either through a continuous gastric secretion or through regurgitation from the duodenum. The former is a complication of frequent occurrence in chronic gastrectasia, while the latter is often met in acute dilatation of the stomach. To give daily lavage as a routine method is liable to be more harmful than beneficial, as the weight of the fluid would tend to retard the contraction of the stomach.



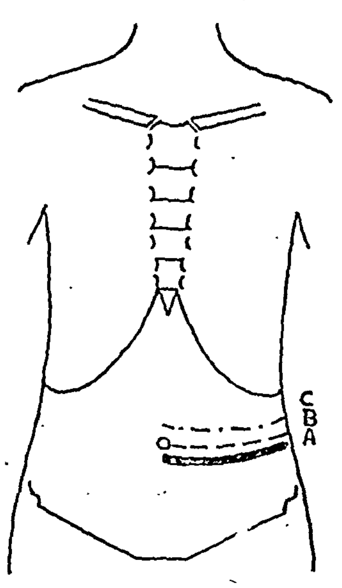


Fig. 1.—Diagram of position of stomach in Case 1; (*A*) greater curvature at time of examination, Oct. 3, 1898; (*B*) point of retraction, Nov. 16, 1898; (*C*) position when patient was discharged April 1, 1899.

Fig. 2.—Diagram of position of stomach in Case 2; (*A*) when first examined, April 30, 1910; (*B*) after treatment, May 23, 1910; (*C*) Aug. 22, 1910, after operation.

For the same reason, the patient should be starved until the stomach has had time to contract. No matter whether a dry, semisolid, or liquid diet is prescribed, any food at all introduced into a dilated stomach will prevent it from contracting. The length of time during which the stomach should be kept free from food depends on the degree and length of time of dilatation. In my experience a period of starvation of from one to ten days has been found sufficient. If perchance the stomach should fail to contract, we can be fairly sure that it is due to adhesions between the stomach and the organs of the lower abdomen or the pelvis, and surgical interference then becomes necessary.

Finally, the patient should be put to bed for two equally important reasons. By keeping the patient in a horizontal position we relieve the dilated stomach from the load of its own weight and, furthermore, by preventing unnecessary expenditure of energy we undoubtedly improve conditions under which the overstretched muscles of the stomach may regain their tonicity. The patient should stay in bed not only during the period of starving but also for some time afterward or until it can be ascertained that the stomach has regained its tonus. This will occur in from a few days to three weeks, according to the seriousness of the case. If the stomach, after having contracted, should again become dilated as soon as ordinary food is given, then we are justified in making a diagnosis of pyloric obstruction, and resort should be had to operative treatment.

REPORTS OF CASES

The following reports of cases will serve to illustrate how readily a dilated stomach will contract if it is only given an opportunity.

Case 1.—Gastric ulcer; pyloric stricture; dilatation of stomach.

History.—The patient, C. C., was a saloonkeeper, 30 years old. When he was 7 years old, he once vomited a large amount of coagulated blood; he stayed in bed a few days, and soon recovered. He remained well from that time until his 29th year, when he began to suffer after his meals from bloating, eructations and occasional vomiting of food. He also began to lose flesh rapidly and weighed only 86 pounds when I saw him for the first time in October, 1898, a year after the first symptom set in. He then complained that all he ate remained in the stomach and fermented until, after several days, he vomited up large masses in which he could recognize food that he had eaten during the previous days.

Examination.—Stomach was found enormously dilated, reaching almost down to pubis, and after the stomach-tube was introduced, about two quarts of undigested food were evacuated. Operation was advised, but refused for the time being. For two weeks the patient was given lavage of the stomach every day and was fed by rectum; but as soon thereafter as he began to take food by mouth, the vomiting began again. He then consented to an operation.

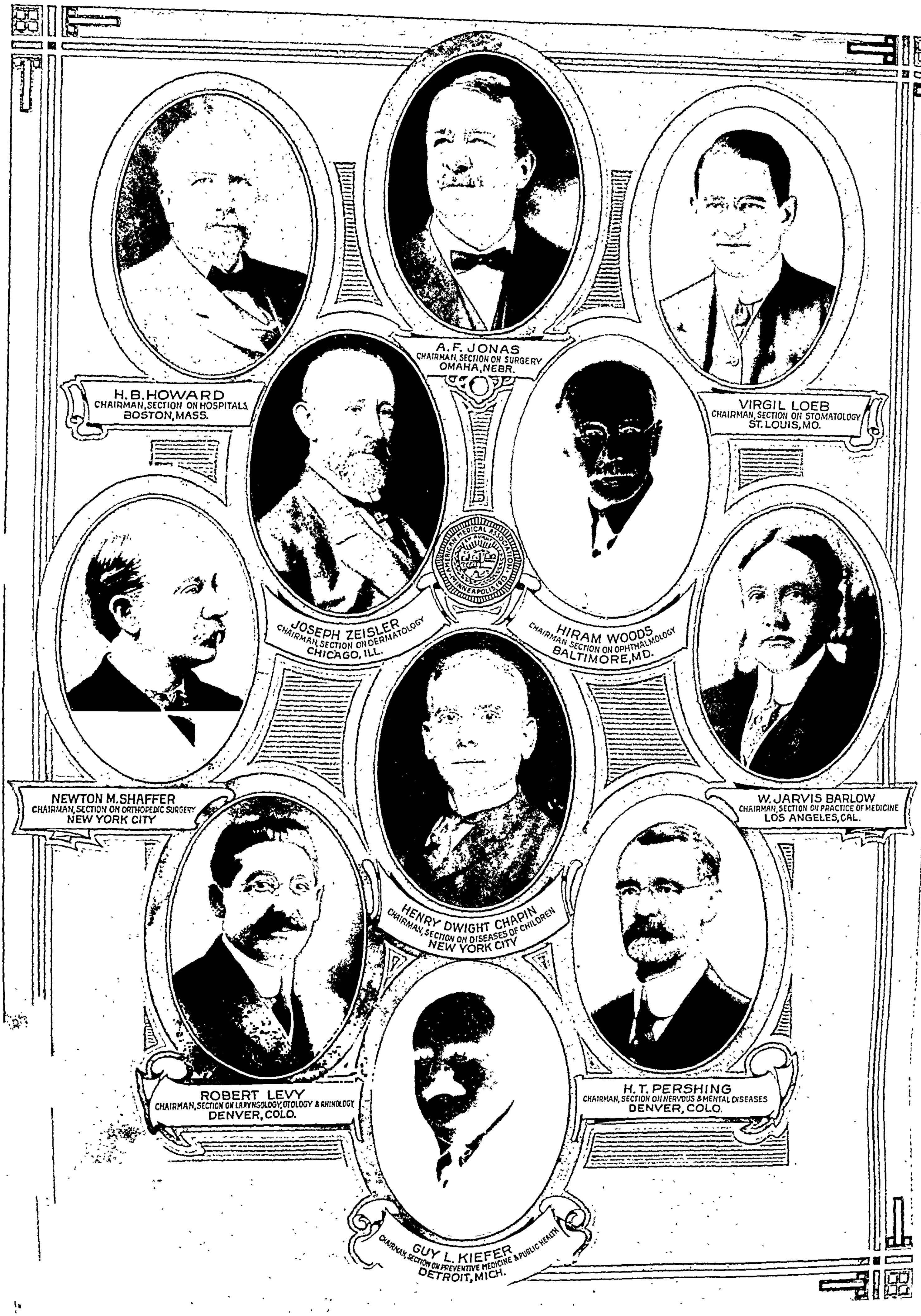
Operation.—Was performed by Dr. Fenger, Nov. 16, 1898. The stomach was found to have contracted considerably and barely reached the umbilicus; the pylorus was almost completely obstructed by scar-tissue. A gastro-enterostomy was made.

Results.—After half a year he weighed 137 pounds and showed no signs of gastric dilatation. He enjoyed good health for seven years, when he began to have attacks of tetany, although he showed no signs of gastrectasia. He finally died in one of these attacks in May, 1907. Necropsy was not permitted.

Case 2.—Duodenal ulcer; gastrosuccorrhea (Reichmann's disease); pyloric spasm; dilatation of the stomach.

History.—The patient, A. B., laborer, 54 years old, was always well until his 28th year, when he began to have pains in epigastrium half an hour after his meals. They gradually grew more severe and were finally relieved only by vomiting of usually about half a pint of a sour, burning fluid. After two weeks he suddenly became worse, was extremely weak and had tar-colored stools, but did not vomit blood. He remained in bed for ten weeks, and was thereafter well until his 47th year. At that time he began to suffer from periods of constipation and also intense epigastric pains coming on shortly after meals and not relieved until he could vomit food and sour, burning fluid. These periods came on almost every spring and fall for six years and usually lasted a few weeks or a month. Between the attacks he was perfectly well. In the fall of 1909, at the age of 53, he had his usual attack. He did not recover in spite of treatment. All winter he suffered from pains in epigastrium and vomiting and lost 25 pounds in weight.

Examination.—When I first saw him, April 30, 1910, at the Augustana Hospital, he weighed 116 pounds; his stomach was dilated and came down about one finger's breadth below the umbilicus; pronounced splashing sounds could be produced and the stomach became at times very hard and rigid during palpation, the rigidity lasting from one-half to one



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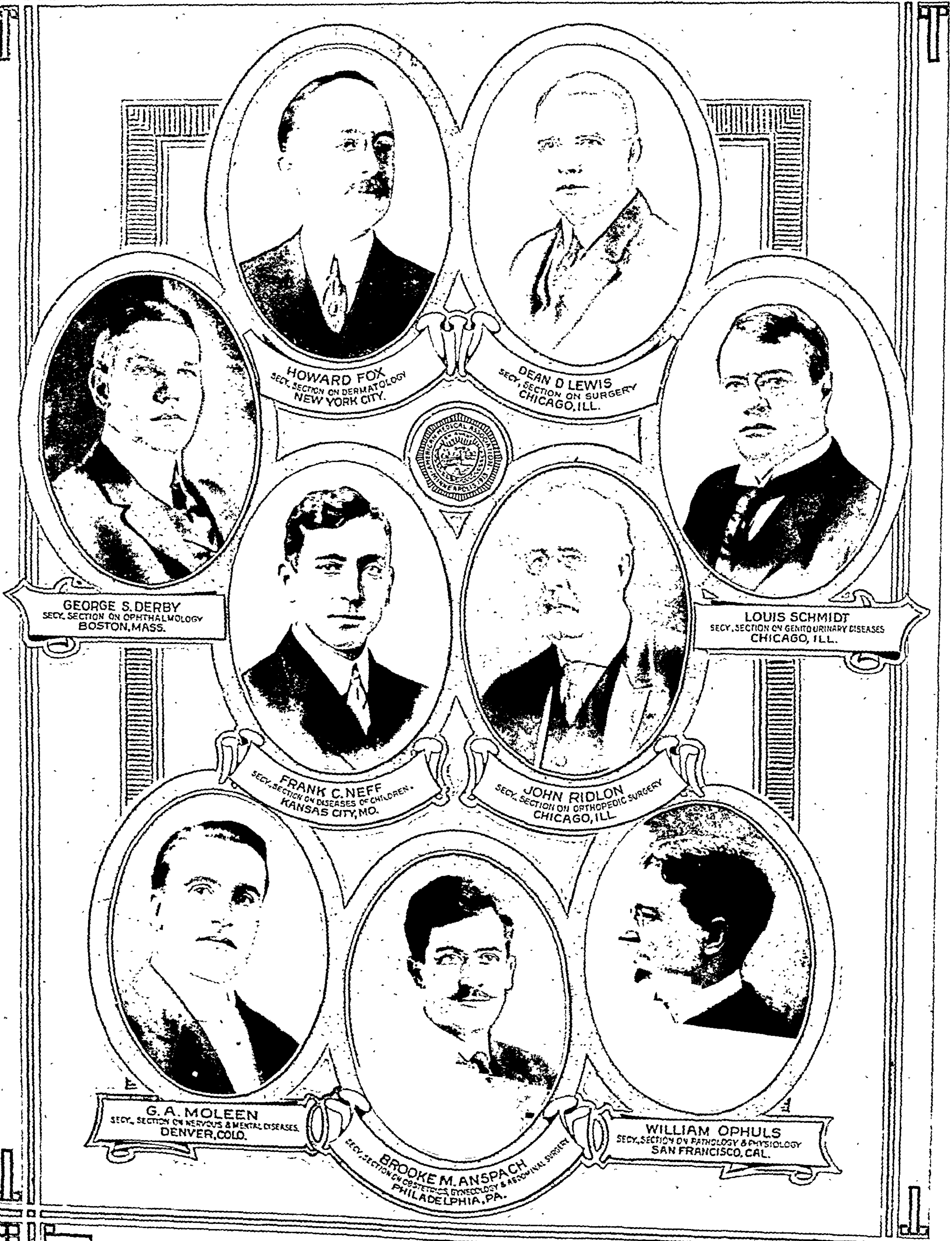
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SOME OF THE SECTION SECRETARIES

The Journal A.M.A., June 14, 1913

minute. The tube was introduced at once, five hours after his breakfast, which had consisted of two eggs, bread and milk. Six hundred c.c. of a yellowish fluid were evacuated, which had almost no odor and contained some undigested pieces of egg-albumin and no mucus. The total acidity of the fluid was 60 and the free hydrochloric acid was 40.

Non-Operative Treatment.—The patient was put to bed and was given moderate doses of bismuth and bicarbonate of soda and saline laxatives, and was fed by rectum. The stomach-tube was thereafter introduced occasionally in the morning to ascertain whether or not the stomach was empty. It was found to contain decreasing amounts of pure gastric juice up to the tenth day of starvation. Two days later milk was given by mouth, and thereafter the patient received gradually increasing amounts of soft food, and during two weeks he gained 16 pounds in weight. The greater curvature was then found at the level of the umbilicus; there was no splashing on palpation of the abdomen, and no retention of food in the stomach. But when the tube was introduced into the stomach, May 26, after a starvation of twelve hours, it was again found to contain 100 c.c. of gastric juice. It was therefore evident that there was again a continuous secretion going on. Under such circumstances operation was advised, as it was thought most likely that the attacks would return as soon as the patient began to work and eat ordinary food. He was again starved for two days in order to stop the gastric secretion.

Operation.—Laparotomy was performed by Dr. A. J. Ochsner May 28, 1910. The stomach was greatly hypertrophied but not dilated: the pylorus was thick and rigid and in the duodenum, about half an inch below the pylorus, was found a thickened area of the size of a dime with scar-tissue. Gastro-enterostomy was made. Three months later the patient weighed 157 pounds, having gained 41 pounds since his admission to the hospital. He was feeling well and showed no signs of gastric dilatation, the greater curvature standing one finger's breadth and a half above the umbilicus.

Case 3.—Pyloric cancer; dilatation of the stomach.

Patient.—H. S., clerk, 50 years old, was admitted to the Augustana Hospital Jan. 22, 1909. He had suffered from more or less severe epigastric pains after his meals since the fall of 1907. Lately he had begun to lose flesh rapidly. During the last month he had been able to retain only liquid food; solid food caused severe pains which were not relieved until he had vomited. His complexion had turned yellowish during the last two weeks.

Examination.—Patient was cachectic: the stomach was dilated, and the greater curvature stood about two fingers' breadth below the umbilicus. A hard tumor, the size of a walnut, could be felt above and to the right of the umbilicus; peristaltic waves could be plainly seen proceeding from the left to the right toward the tumor. The stomach-tube was introduced and 480 c.c. of a grayish fluid were evacuated which contained no free hydrochloric acid but gave a strong reaction for lactic acid. A diagnosis of carcinoma was made with pyloric stenosis and secondary dilatation of the stomach. Patient was put to bed and fed by rectum for five days. The stomach had by that time contracted and the greater curvature was standing one finger's breadth above the umbilicus.

Operation.—Laparotomy was performed by Dr. A. J. Ochsner. A cancer of the pylorus was found which also involved the head of the pancreas. The stomach was of normal size; its walls were considerably hypertrophied. A gastro-enterostomy was made.

The patient was quite comfortable thereafter for about half a year, but died in the fall of 1909.

COMMENT

It will be noticed that in these cases, although an operation was found necessary, it was not the gastric dilatation *per se* that formed the indication for surgical interference. In fact, the stomach had contracted in all three cases under the treatment advocated in this paper, but the underlying causes—a stricture of the pylorus, a pyloric spasm and a pyloric cancer, respectively—made a gastro-enterostomy necessary.

Case 4.—Splanchnoptosis (gastric ulcer?); gastrosuccorrhea; pyloric spasms; dilatation of the stomach.

History.—Mrs. H. L., 39 years old, had married at 21 years of age and had borne six children. The delivery of the fifth child, when she was 29, was very difficult and necessitated use of forceps. Thereafter she was very weak, became constipated, and began to have epigastric pains about an hour after dinner and supper. These pains came on in periods and particularly if she worked hard; they were usually relieved, for the time being, by a dose of baking-soda or by taking some food. In August, 1909, the pains became more intense, appeared also in the middle of the night and were then not relieved until she had vomited a pint or two of a very sour, burning fluid. Thereafter she would be free from pains for a few days. She was rapidly losing weight.

Examination.—Dec. 1, 1909, she came under my observation. There was evidence of splanchnoptosis. The abdomen was very prominent, the lower edge of the liver was considerably below the costal arch in the mammillary line and there was no tympanism in Traube's space. The stomach had apparently sunk below the ribs and could be seen as a prominence which almost reached the pubis. During the palpation one could observe how it contracted at times, peristaltic waves were seen to proceed from left to right, and pronounced splashing sounds could be produced. The next morning, after some dry currants had been given at night, the stomach-tube was introduced and about 100 c.c. of a dirty, grayish fluid were evacuated in which the currants were seen floating around; the total acidity was 98 and the free hydrochloric acid 76.

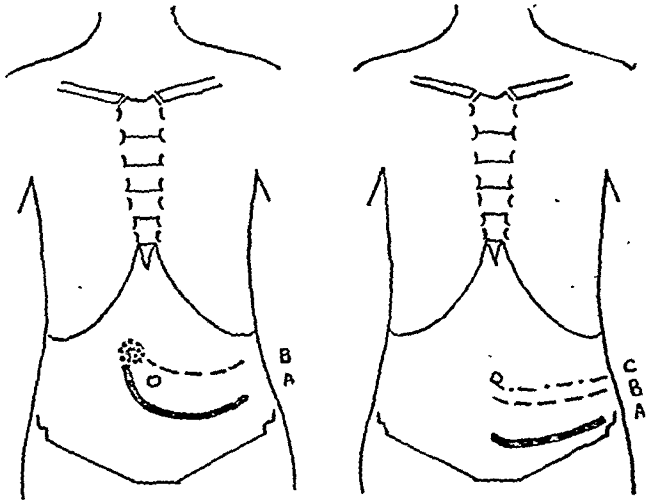

Fig. 3.—Diagram of position of stomach in Case 3; (*A*) greater curvature when first seen Jan. 22, 1910; (*B*) position at the time of operation for cancer, Jan. 27, 1910.

Fig. 4.—Diagram of position of stomach in Case 4; (*A*) of greater curvature, Dec. 1, 1909; (*B*) position after treatment, Dec. 7, 1909; (*C*) point of retraction on discharge.

Treatment and Results.—Patient was put to bed, given moderate doses of bismuth and bicarbonate of soda and saline laxatives, and fed by rectum. Abdominal massage was given daily and cold, wet dressings were applied. Three days later the gastric juice was still being secreted; 150 c.c. were evacuated in the morning, the total acidity was 64 and the free hydrochloric acid 31. On the sixth day the stomach was empty and had contracted so that the greater curvature was found the breadth of a finger and a half below the umbilicus. On the tenth day the patient began to take food by mouth, and on the twenty-first day she was allowed to get up. She weighed then 105 pounds. She put on flesh gradually and five months later weighed 135 pounds, had no pains and had normal bowel movements. The stomach was still displaced downward but not dilated: the greater curvature was found slightly below the umbilicus and the stomach emptied itself in a normal manner.

Since then she has been practically well and has been able to eat ordinary food. Only a few times, when she has been doing some very strenuous work or eaten some particularly unsuitable food, has she had recurrence of her epigastric pains. These rapidly disappeared after a few doses of bismuth and bicarbonate, a laxative, one or two days' rest in bed and starvation.

Case 5.—Chlorosis; duodenal ulcer; pyloric dilatation of the stomach.

History.—Miss E. S., aged 23, came under my observation Sept. 10, 1909. She had always been well up to November, 1908, when she began to have epigastric pains two or three hours after meals. After a few weeks they became more severe and were not relieved until she vomited undigested food. She gradually grew worse and was rapidly losing flesh. In the summer of 1909 she began to vomit not only undigested food, but also once in a while large quantities of sour or bitter fluid.

Examination.—The patient was very pale and of a greenish complexion. Her stomach was found dilated, the greater curvature standing two fingers' breadth below the umbilicus, loud splashing was heard on palpation and, after the stomach-tube had been introduced, about 150 c.c. of greenish fluid were evacuated, although she had had nothing to eat or drink for the previous eight hours. Two hours before the examination she had vomited "a pailfull" of the same fluid. Analysis showed strong reaction for free hydrochloric acid. Her weight was 114 pounds. She was put to bed, fed by rectum and given only water and moderate doses of bismuth and bicarbonate by mouth. The pains disappeared immediately. On the morning of the fourth day the stomach was empty and had contracted so that the greater curvature stood above the umbilicus. On the tenth day she was given warm milk; on the fifteenth day she was allowed to get up and thereafter improved rapidly. Nov. 13, 1909, or two months after she came under my treatment, she weighed 140 pounds, could eat anything she liked without discomfort and there were no signs of dilatation.

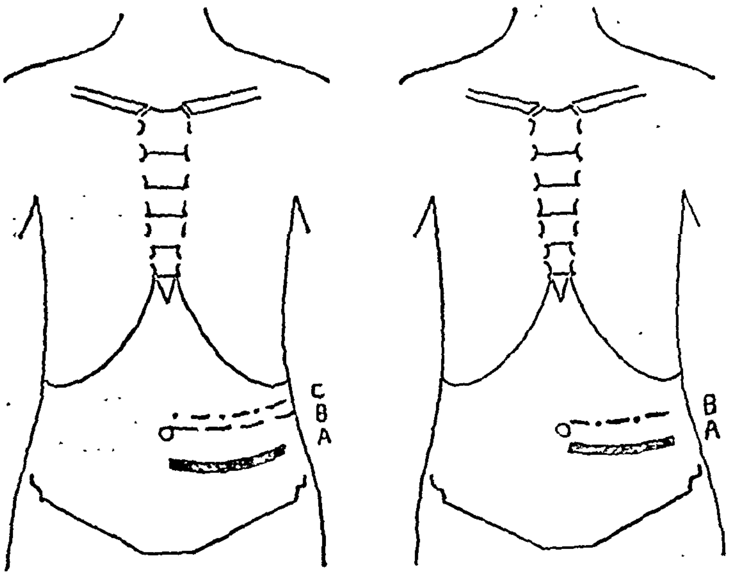

Fig. 5.—Diagram of position of stomach in Case 5; (*A*) dilated stomach, Sept. 10, 1909; (*B*), position after treatment, and (*C*) as found on discharge.

Fig. 6.—Diagram of position of stomach in Case 6; (*A*) lower margin of stomach when seen Aug. 11, 1910, and (*B*) position Aug. 12, 1910, after treatment.

Case 6.—Acute gastric catarrh; atonic dilatation of the stomach.

History.—Miss K. F., aged 25, had had several attacks of appendicitis after she was 10 years old and was operated on for it when she was 24. During the year following the operation she had two attacks of severe cramp in the epigastrium, both coming on directly after a too heavy meal; both times she had to stay in bed and practically starve for three weeks. When she first came under my observation, Aug. 11, 1910, about a year after her operation, she had been visiting in Chicago for three weeks and had been eating candy and cake every day. After breakfast, August 11, she again had severe cramp in the epigastrium. At 7 p. m., when I saw her, she was still in pain, although she had not eaten anything since breakfast.

Examination.—Stomach was dilated, the greater curvature standing one finger's breadth below the umbilicus; pronounced splashing sounds could be produced, and when the tube was introduced a pint of brownish, sour-smelling mass was evacuated, which contained a large amount of mucus and no hydrochloric acid; the total acidity was 18. The pains disappeared immediately. The next day the stomach had contracted.

Treatment.—She starved for two days and stayed in bed for four days. She was given hydrochloric acid before meals and a gradually increasing diet and soon recovered.

COMMENT

The cases here described represent two different forms of gastrectasia: The one is due to a pyloric obstruction caused by a stricture, a spasm, or a cancer; the other due to atony of the gastric wall itself caused by overeating and subsequent catarrh or accompanying a gastroptosis. In all of the cases the stomach maintained its contractility no matter whether the dilatation had lasted a day, as in Case 6, or a year, as in Case 1. But it seems that this remarkable contractility of the dilated stomach has not been properly considered by the authors who have contributed to this subject.

Almost from time immemorial, the so-called dry diet has been advocated as the most suitable for a dilated stomach, the food being given in small and frequent meals. As the results were far from satisfactory, Kussmaul's advice in 1867 to use the stomach-tube, based as it was on the report of a cure, was received with enthusiasm, and there is no doubt that the words of Kussmaul have come true:

"It is possible to empty the stomach completely by means of the stomach-pump, and probably, provided the elastic and contractile powers of the stomach are not entirely exhausted, to restore its ability to contract down to its smallest dimension."[1]

It appears, however, that most of Kussmaul's followers overlooked one factor in the treatment of gastrectasia as advocated by him: namely, that the patient should be put to bed. Too great stress was therefore laid on the use of lavage alone and, for many years, a discussion was carried on as to how often and at what time of the day a gastric lavage should be given. Some authors advised that it be given every day, others only every second or third day; some gave it in the evening, while others gave it in the morning, apparently with equally uncertain results.

Another great stride forward in regard to the treatment of gastrectasia was taken when, in 1893, Rössler[2] advised that no food at all be given by mouth for four days, and when von Mehring showed how valuable rectal feeding and particularly rectal injections of normal salt solution are in cases of gastrectasia. In fact, it has been demonstrated that the emaciated organism of a patient suffering with a gastric dilatation eagerly absorbs fluid from the rectum, while no absorption is possible through the gastric mucosa.

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[1] "Mittelst der Pumpe musste es gelingen den Magen vollständig auszuleeren, ihm vielleicht sogar, wenn seine elastischen und contractilen Kräfte nicht ganz erschöpft waren, die Fähigkeit sich auf seinen kleinsten Umfang zusammenzuziehen wieder zu verschaffen." Kussmaul, Adolf: Ueber die Behandlung der Magenerweiterung durch eine neue Methode mittelst der Magenpumpe, Deutsch. Arch. f. klin. Med., 1869, vi, 455.

[2] Rössler: Ueber die Ausschaltung der Ernährung durch den Magen bei Magenerweiterung, Wien. klin. Wchnschr., 1893, vi, 720.

But the works of Rössler and von Mehring seem to have passed comparatively unnoticed, and the standard treatment for gastrectasia consisted still in dry diet and daily lavage, although some changes and additions of slight importance were made to it. Rosenheim[3] advised a liquid diet and pointed out that liquids will pass the pylorus more rapidly than solid food, if the patient is in a recumbent position. Cohnheim[4] gave large doses of olive-oil, by which he claimed to be able to remove the cause for gastrectasia in cases in which it is not due to an irreparable pyloric stenosis.

Other therapeutic measures that have been employed are the wearing of a bandage to support a dilated stomach, and the use of electricity applied to the abdomen or directly to the wall of the stomach by means of an intragastric electrode, massage, and different hydrotherapeutic measures. But when we study the reports of cases that are given in support of the recommendations of these various treatments, we will easily find that the results cannot compare with those obtained by Rössler, who also insisted on rest in bed during the starvation.

For instance, Crämer,[5] in order to illustrate the brilliant results that may be had by daily lavage and dry diet, reports the case of a man 33 years old, who had been vomiting sour masses for two weeks only. His stomach reached three fingers' breadth below the navel, there were loud, splashing sounds, and a pint of grayish-brown fluid was evacuated from the stomach in the morning. After five weeks of careful treatment, the stomach still contained from 750 to 1,000 c.c. of fluid in the morning, and only after half a year was it found fairly empty; he had then gained only 10 or 15 pounds in weight. But one of Rössler's patients gained 4.3 kg. in one week, and one of my patients gained 34 pounds in two months.

B. Reed,[6] in a report of cases of gastrectasia treated by diet, massage and intragastric electricity, mentions one case in which the greater curvature was 3 or 4 inches below the umbilicus and stood at the level of the navel only after three months' treatment. In another case the greater curvature was 3½ inches below the umbilicus and it was seven months before it was found an inch above the umbilicus. In a third case of Reed's, in which the greater curvature was 3 or 4 inches below the umbilicus, the treatment seemed to be of no effect during the first three months and only during the fourth month did the patient improve. But in one, Case 4, reported above, the stomach contracted in three days, and in Case 3 in six days.

It seems only fair to conclude, therefore, that the most efficient treatment of gastric dilatation, no matter of what nature or of what degree, is to give the stomach complete rest by putting the patient to bed, evacuating the stomach, and keeping it empty until it has had time to contract. These are the three essential features of the treatment of gastric dilatation. Other therapeutic measures should be considered only as auxiliary. They may, however, be of great value even if they are not strictly necessary, particularly injection of food and salt solution by rectum, hydrotherapeutic measures and massage. Only a few drugs are of value in these cases, and they are especially sodium bicarbonate in cases of hyperchlorhydria or continuous gastric secretion, bismuth in case of catarrh or ulcer, and saline laxatives.

After the stomach has contracted, the chief indication is to feed the patient properly. Almost any kind of wholesome and well prepared food is then tolerated. It may be advisable to prescribe a chiefly vegetarian diet in order to overcome constipation, which always accompanies gastrectasia; but it has been repeatedly observed that a patient of this class when his stomach recovers its normal functions, at the same time also gets rid of a constipation which may have troubled him for years. The patient should also be admonished to avoid everything that might cause a relapse, as, in some cases, the excessive use of tobacco, coffee and alcoholic beverages, which may produce hyperchlorhydria or hypersecretion, pyloric spasm and secondary gastric dilatation; or in other cases, overloading of the stomach, particularly when the patient is tired or depressed, as it may lead to atonic gastric dilatation. Finally, the patient should be told that, at the slightest sign of relapse, he should evacuate his stomach, starve and, if necessary, remain in bed for a day or two, as the stomach will soon return to normal conditions if this treatment is immediately applied.

A discussion of the treatment of gastrectasia would be incomplete if it did not also take into account the treatment of its causes. But I will confine myself to two points in this respect. The one is that the treatment of gastrectasia with removal of gastric contents, starvation and rest in bed is the very best one for three conditions which very frequently are met with as causative factors in gastrectasia, namely, gastric or duodenal ulcer, pyloric spasm, and continuous gastric secretion. The other is that the treatment referred to is the very best means at our disposal to make a definite diagnosis as to the cause of the dilatation, if this cannot be immediately determined. By employing this treatment, we shall be able to decide in a few days whether or not the dilatation is due to adhesions of the greater curvature to other abdominal organs, as the stomach will, of course, fail to contract in such a case; and we shall be able to decide within a few weeks whether the pylorus is patent or not, as, in case of organic pyloric obstruction, the dilatation will return as soon as the patient begins to take ordinary food. In this connection I also want to point out the advantage of using this treatment as a preparatory one before a gastro-enterostomy is made. The advantage is twofold. In the first place we stop a continuous gastric secretion, which, if it is present at the time of the operation, may cause a peptic ulcer in the part of the jejunum that is sewed up to the stomach. Secondly, by giving the stomach an opportunity to contract before the gastro-enterostomy is made, we shall surely have better results from the operation, because the opening is laid between the stomach and the intestine when both are in a state of contraction. If the anastomosis is made between a dilated stomach and a contracted intestine, the operation may prove a failure because of a secondary contraction of the gastric wall and subsequent narrowing of the opening.

CONCLUSIONS

1. A dilated stomach retains its contractility wonderfully well no matter for how long a time or to what degree it has been dilated.

2. The chief purpose of the treatment of a gastric dilatation should be to give the dilated stomach every

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[3] Rosenheim, F.: Ueber motorische Insufficienz des Magens, Berl. klin. Wchnschr., 1897, xxii, 228, 252.

[4] Cohnheim, P.: Weitere Mittheilungen über die Heilwirkung grosser Dosen von Olivenöl bei Erkrankungen des Magens und des Duodenums, Ulcus, Hyperchlorhydrie, spastischen und organischen Pylorus-Stenosen und deren Folgezustände (Gastrektasie), Ztschr. f. klin. Med., 1904, lii, 110.

[5] Crämer, F.: Magenerweiterung, motorische Insufficienz und Atonie des Magens, München, 1903, p. 96.

[6] Reed, B.: Dilatation of the Stomach, with Reports of Cases Treated by Diet, Massage, and Intragastric Electricity, The Journal A. M. A., 1898, xxxi, 220.

possible opportunity to contract. This purpose is best accomplished by removal of gastric contents, starvation and rest in bed.

3. These three therapeutic measures should be considered a distinct method of treating gastric dilatation, indicated as soon as a diagnosis of dilatation has been made, just as the starvation-cure is considered a method of treating gastric ulcer.

4. This method is indicated as a preparatory treatment in those cases of gastric dilatation in which a gastro-enterostomy is to be made on account of the cause which has led to dilatation, as under such treatment the stomach will contract as far as possible and an eventual continuous gastric secretion will cease.

5. Intragastric or extragastric electricity, massage, cold compresses or other hydrotherapeutic measures, abdominal supporters, rectal feeding, strychnin, antiseptic drugs and alkalies are valuable auxiliary remedies which are not strictly necessary for the treatment of gastric dilatation.

1311 LaSalle Avenue.

SIGNIFICANT SIGNS IN EARLY DIAGNOSIS

H. W. EMSHEIMER, M.D.
Chief Admitting Physician, Mount Sinai Hospital
NEW YORK

The term *"significant"* is used advisedly. There are certain symptoms or signs which at all times are indicative of pathologic processes. Their theoretical value in diagnosis we would never think of denying; and yet practically it is just this evidence that we are prone to overlook in rendering our decisions, blinded as we often are by an over-abundance of signs, the very multitude of which tends to obscure the clinical picture. Symptoms such as hematemesis, melena and chills, and physical signs like petechiae, localized tenderness and markedly dilated veins always signify abnormal conditions, and cannot under any circumstances be discarded as valueless diagnostic evidence. They mean something—they are what are termed in this paper "significant signs."

I am firmly convinced that many mistakes in diagnosis are avoidable, the errors in these instances being the result of inability to discriminate between salient and unimportant facts. The "snap" diagnostician startles his audience, not by laboriously gathering together all the evidence possible for or against his views, but by rapidly surveying the evidence at hand and recognizing one or two definite signs on which he bases his opinion. Censure this method as we may, we cannot deny that, other things being equal, it is just this keenness of perception, this ability to grasp the essential details, that justly places one physician on a higher plane than another in the eyes of his fellow practitioners.

Early diagnosis especially depends not on the number of symptoms presented by the patient but on a recognition of their relative significance. One definite sign is of far greater value than many uncertain ones and is often all that is necessary to make the proper and final diagnosis. Familiar though this simple rule may be, it is certain that it is not always observed, with the result that differential diagnosis is often rendered difficult. It is to emphasize this essential truth rather than to suggest any new or special signs in diagnosis, and to cite a few cases which should prove instructive *per se*, on account of the diagnostic problems they present, that I have collected from the material seen recently in the admitting department and in the wards of Mount Sinai Hospital, 10 cases illustrating the point in question. They are as follows:

Case 1.—*Signs of diffuse peritonitis. Tenderness and indefinite mass in right iliac fossa, suggestive of appendicitis. Hematemesis.*[1] *Ruptured gastric ulcer.*

M. I., aged 40. (Service of Dr. Gerster.) Patient's previous history, with the exception of loss of appetite for three weeks preceding admission, had been negative. Three days before admission the patient had experienced sudden pain in the right lower quadrant of the abdomen. No vomiting or other symptoms at onset. Twenty-four hours later patient had vomited a small quantity of brownish-black material. The abdominal pain had progressively increased in severity up to the time of admission.

Physical examination revealed the evidences of diffuse peritonitis. The entire right rectus muscle was held rigid. There was general but no localized tenderness. Rectal examination revealed a sense of resistance high up on the right side. Liver dulness was not diminished in extent. There was distinctly movable flatness in both flanks. Laparotomy showed a perforated gastric ulcer, with free fluid and gas in the peritoneal cavity.

The diagnostic probabilities in this case were two: ruptured appendix, and perforated gastric ulcer with purulent peritonitis. There were several indefinite signs pointing toward the former, and but one definite sign indicating the latter. We could not logically regard hematemesis here as a coincidence; it was a "significant" sign. It meant something and had to be considered of primary importance in making a correct diagnosis.

Case 2.—*Signs and symptoms of cerebrospinal meningitis. Localized tenderness over lower spine. Osteomyelitis of spine.*

A. W., aged 46. (Service of Dr. Meyer.) For five days prior to admission patient had complained of malaise, fever and pain in the dorsolumbar region of the spine, and in the left side of the chest posteriorly, aggravated by deep breathing. These symptoms had progressively increased to date of admission.

Physical examination revealed a very much prostrated patient, lying with his head slightly retracted and his right hand beneath the lower part of his spine. Accelerated and somewhat irregular respirations, blepharospasm, tache cérébrale, exaggerated knee-jerks, ankle-clonus, a Kernig's sign, a Babinski reflex and a temperature of 104 F. completed the picture of acute meningitis. In addition there was localized, excruciating tenderness over the tenth, eleventh and twelfth dorsal vertebrae, over the base of the left lung and the lowest three left ribs. The following day the spinal pain and tenderness diminished considerably and there appeared a small area of bronchial breathing about the size of a half dollar, with a few fine râles at the left base posteriorly. Lumbar puncture was absolutely negative. From day to day the localized tenderness diminished and the picture became more meningeal. The rigidity of the neck increased, the patient became irrational, and twitchings and spasticity of the lower extremities developed. The pulmonary signs at the left base increased, so that eight days after admission there was evidence of consolidation and of fluid. The latter partly removed by aspiration showed a cell count of 95 per cent. polymorphonuclears, and contained the *Staphylococcus aureus* on culture. The patient's general condition became rapidly worse until his death a few days later. Necropsy revealed an osteomyelitis of the spine with a large abscess which had ruptured into the pleural cavity.

Viewed in the light of the post-mortem findings the picture here was entirely obscured by the disappearance of one sign which if recognized and given its full value would have rendered the diagnosis clear. The marked localized tenderness over the lumbosacral spine present on the day of admission indicated beyond doubt the existence of a pathologic process in that region. It is unfortunate that later developments pointing toward meningitis, primary, or secondary to pulmonary disease, so complicated the clinical picture that this most important sign was either overlooked or discarded as unimportant. It is interesting to note that in a case seen some months later on the service of Dr. Gerster, presenting similar evidences of meningitis with distinct localized tenderness over the fifth lumbar vertebra, the diagnosis of spinal osteomyelitis was made and proved correct. The patient died from a general staphylococcemia.

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[1] Salinger, D.: Leube's Special Medical Diagnosis, Appleton & Co., 1907, p. 274.

Case 3.—*Signs of acute appendicitis with abscess. Distinct ovarian zone of hyperalgesia (Head's zone).*[2] *Twisted ovarian cyst.*

R. M., aged 13. (Service of Dr. Gerster.) Patient's illness began acutely three days before she came to the hospital with sudden pain in both right and left iliac fossae and vomiting. The pain had progressively increased in severity since onset. Patient had never menstruated.

On examination there was found general abdominal rigidity and tenderness in both the right and the left iliac fossae. The patient was prostrated. She had a temperature of 102 and a pulse of 112. Rectal examination revealed a very tender indefinite mass high up in the midline extending somewhat to the left. When tests were made for zones of hyperalgesia, appendicular and ovarian, it was found that there was a distinct area in the left iliac fossa, extending down the inner side of the left thigh for a distance of about three inches and corresponding to a left ovarian zone of hyperalgesia. There was no area of hyperesthesia in the right iliac fossa. The diagnosis of twisted ovarian cyst was made on this ground only and proved correct at operation.

The intelligent cooperation of the patient is essential to establish the existence of a zone of hyperalgesia; if found present it is of considerable diagnostic importance. In two similar cases seen recently this necessary cooperation was not forthcoming, and in both of these cases wrong diagnoses were made.

Case 4.—*Acute onset, right hypochondriac pain and tenderness. Diagnosis of acute cholecystitis. Red blood-cells in urine. Renal calculi.*

C. M., aged 30. (Patient of Dr. A. A. Berg.) Twelve hours before admission the patient had experienced a sudden lancinating pain in the right hypochondrium and right loin, with vomiting, chill and a rapid rise of temperature to 105.

Pressure in the right hypochondrium elicited considerable tenderness. There were no other symptoms. An examination of the catheterized urine revealed a few red blood-cells. Despite this the diagnosis of acute cholecystitis was made. Three days after admission the pain ceased and the temperature fell to normal. Vaginal examination at that time revealed two small yellowish-white calculi which had spontaneously passed, lying in the right fornix.

Here the diagnosis depended entirely on the urinary findings. Despite the presence of red blood-cells in the urine, acute cholecystitis was considered the most probable diagnosis. The finding of the calculi in the vagina proved that positive signs like hematuria cannot be disregarded.

Case 5.—*Signs of osteomyelitis of rib with cold abscess. Yellow granules in sputum. Actinomycosis.*

C. A., aged 65. (Service of Dr. Manges.) For six months patient had complained of pain in the right chest, increasing weakness, cough and profuse expectoration, the latter occasionally blood-tinged.

Physical examination showed the usual evidences of senility. In addition there were dulness with diminished breath and voice sounds at the base of the right lung posteriorly and a semisolid, gelatinous fluctuating swelling over the lowest two right ribs anteriorly. At the time of the first routine examination by the house physician, a jar containing about 4 ounces of sputum expectorated in a few hours was inspected and found to contain numerous minute yellowish granules. The diagnosis was then made of actinomycosis, and proved correct by microscopic examination of these yellow granules and of the fluid aspirated from the fluctuating swelling over the ribs, both of which showed the ray fungus.

This was not a "snap" diagnosis. It was the result of observation; it showed ability to recognize one positive sign and to use it to the best advantage. Tuberculosis of the lungs and ribs is much more common, and would have been accepted as the original diagnosis by the ordinary observer. But this one sign was sufficient evidence in this instance to establish not only a tentative but also a final diagnosis.

Case 6.—*Clinical picture of an acute infectious disease. Petechial eruption. Cerebrospinal meningitis.*

J. H., aged 16 months. (Service of Dr. Koplik.) The patient had been ill for five days with mild fever, and three days before admission had had a convulsion. The day before admission there had developed a scanty rash on the face and lower extremities.

Clinically the child appeared to be in the prodromal stage of an infectious disease. The temperature was 103. The child looked sick, with accelerated respirations, a flush on both cheeks, slight dilatation of the alae nasi with each expiration, moderate rigidity of the neck and the suggestion of a strabismus. Kernig and Macewen signs were doubtful. Scattered over the neck and lower extremities were a moderate number of distinct petechiae, fresh in places, in others fading. The diagnosis of acute cerebrospinal meningitis was made. Lumbar puncture revealed turbid fluid filled with meningococci.

This diagnosis was not a brilliant one, and yet if we had failed to take the eruption into consideration a mistake would surely have been possible especially in the absence of an epidemic of meningitis, inasmuch as the general condition of the child warranted the assumption that it was suffering from pneumonia or any one of the infectious diseases. The eruption, however, furnished positive evidence on which a correct verdict was rendered.

Case 7.—*Signs of broncho-pneumonia. Endocarditis. Petechia*[3] *in conjunctiva. Diagnosis of infective endocarditis. Negative blood-culture. Recovery.*

E. M., aged 64. (Service of Dr. Manges.) The patient's illness had begun suddenly six days before admission to the hospital with a chill and vomiting. Since then patient had had fever, headache, chilly sensations and a severe cough.

On examination the patient appeared prostrated. Her respirations were markedly increased in frequency and depth. The temperature was 104. There was a loud systolic murmur at the apex of the heart with evidence of slight increase in the area of cardiac dulness. In the lungs there were several small areas of bronchial breathing and voice with fine subcrepitant râles. In the left conjunctiva was a distinct petechia with white center, resembling minutely the petechiae of bacterial endocarditis. On the strength of this evidence together with the physical signs of endocarditis and a history of chills and fever a diagnosis of infective endocarditis with pulmonary infarcts was made. Two days after admission, the petechia in the conjunctiva had disappeared. The temperature dropped by crisis: the lung signs decreased; and about ten days later the patient was discharged from the hospital, perfectly well. The blood-culture taken on the day of admission was negative. The soft cardiac murmur persisted.

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[2] Elsberg and Neuhof: Diagnostic Value of Cutaneous Hyperalgesia (Head's Zones) in Abdominal Diseases, Am. Jour. Med. Sc., 1908, cxxxvi, 690.

[3] Libman: A Study of the Endocardial Lesions of Subacute Bacterial Endocarditis with Particular Reference to Healing and Healed Lesions, with Clinical Notes, Am. Jour. Med. Sc., September, 1912.

Cases of pneumonia with petechiae in the conjunctivae are rare; cases of bacterial endocarditis with petechiae, very common. It was perfectly logical to assume that inasmuch as all the signs and symptoms in this case could be explained on the basis of an infective endocarditis and that in addition there was present a sign practically pathognomonic of the condition, this diagnosis was the correct one. The fact that this was an exception to the general rule does not militate against the rule, but simply emphasizes the possibility of error and puts us on our guard when we come in contact with similar cases.

Case 8.—*Acute onset. "Typhoid state." Violent headache.*

S. E., aged 25. (Service of Dr. Meyer.) The patient gave a history, dating back eight days, of acute onset with fever, mild abdominal cramps, increasing prostration and very violent headaches unaffected by any form of medication.

On admission the patient's temperature was 102, the pulse 100. He was in a distinctly "typhoid state" and markedly prostrated. His right hand was held almost constantly on his forehead, evidencing intense frontal headache. There was no eruption on the body; no enlarged spleen. There were no Kernig, Babinski or Oppenheim signs, and no paralyses. Within thirty-six hours the temperature had dropped almost to normal, and the headache had disappeared; three days after admission the patient was practically well. The blood-count had been normal; the Widal negative.

Here at least three possibilities might have been considered; a meningeal or cerebral condition, rendered improbable by the absence of vomiting and localizing symptoms; typhoid, doubtful on account of the acute onset, and Brill's disease[5] or typhus, rendered most probable on account of the very intense headache characteristic of this condition. There is probably no other disease, with the possible exception of one of cerebral origin, that is the cause of so intense headaches as Brill's disease. We have no actual proof that the patient was suffering from this disease, but the acute onset, the marked headache, the prostration, the critical drop of temperature on the eleventh day and the uneventful recovery indicated beyond reasonable doubt that he was admitted convalescing from typhus. In this case one significant symptom, intense headache, made the diagnosis.

Case 9.—*Radiating pains in lower extremities. Picture of sepsis or infectious myelitis. Small tumor of breast. Metastatic spinal and cerebral carcinosis.*

L. K., aged 48. (Service of Dr. Meyer.) The patient had been ill for seven weeks, at first with bitemporal headache, radiating pains down lower extremities, slight fever and increasing weakness.

On examination the patient looked extremely septic; at times she appeared somewhat irrational. The temperature was 103, the pulse 130. There were many pustules scattered over the forehead and body. The heart, lungs and abdomen were normal. There was some tenderness over the entire right femur. The knee-jerks were somewhat exaggerated. The picture was that of an extreme sepsis, beginning possibly as an osteomyelitis of the right femur, or of a myelitis following some infectious disease. On the next day, routine examination revealed in the left breast a small, hard, nodular tumor, undoubtedly carcinoma, about the size of a small lemon. The spinal and cerebral symptoms increased very rapidly until the patient's death about a week later.

No necropsy was obtainable, but it was the consensus of opinion that the patient died from a metastatic carcinoma. In this instance the diagnosis was of course impossible until the discovery of the breast tumor. If we had regarded this finding as merely incidental we would have been unable to make the proper diagnosis; but when, instead of discarding this one positive sign, we endeavored to make it "fit into" the clinical picture, it was not difficult to explain all the other phenomena.

Case 10.—*Symptoms of chronic nephritis with acute exacerbation. Hematuria. Exudate on throat. Tuberculosis of throat and urinary tract.*

H. W., aged 28. (Service of Dr. Rudisch.) The patient had been in the hospital ten months before this second admission, suffering from symptoms of chronic nephritis, and was discharged improved from what was thought to be an acute attack of this disease. On the second admission the patient complained of pain in the right loin, slight cough, occasional sweats, headache, dizziness, loss of weight and mild intermittent hematuria for four months. For four weeks he had had sore throat and dysphagia.

Examination revealed an emaciated, anemic individual, with slight tenderness in the right costo-vertebral angle and a few indefinite lung signs. The pharynx was covered with a thin, dirty-gray exudate.

A diagnosis of acute exacerbation of a chronic nephritis was made, on the basis of the former diagnosis. The throat condition was considered to be a streptococcus infection or a Vincent's angina purely incidental and dependent on the patient's weakened condition. If we had looked further we would have found that besides the exudate in the throat there were many discrete yellowish-gray papules resembling small tubercles scattered over the soft palate, fauces, uvula and tonsils. A spread from these papules later showed tubercle bacilli, which were also found in the sputum and in the urine.

It is possible, of course, for several morbid processes to be operative at the same time; still in general it is more reasonable to assume that one underlying cause is responsible for all of the patient's symptoms. If in this case we had given one significant sign the importance it deserved in the differential diagnosis, instead of discarding it as worthless, we would have been spared the humiliation of having our diagnosis entirely overthrown by further observations.

Many more cases could be cited, but these suffice to illustrate the points I have endeavored to prove, namely, that "significant" signs, that is, evidences of actual abnormal processes, are of the utmost diagnostic importance; and that one of these "significant" signs is of much more value than a multitude of indefinite ones. To recognize these signs and to know their importance as weighed against others perhaps more numerous and more striking, should be our aim so that early diagnosis in the future will become less and less a complicated problem.

I take this opportunity to thank the superintendent and attending physicians and surgeons of Mount Sinai Hospital for permission to make use of the hospital records in the preparation of this article.

605 West One Hundred and Thirty-Seventh Street.

Maternal Ignorance and Infant Death-Rate.—One of the most attractive fields of sanitary endeavor, from a financial standpoint, is the prevention of infant mortality. It has now been demonstrated beyond a doubt that the chief cause of a high infant death-rate is the ignorance of the mothers. It has also been shown that this ignorance can be overcome by visiting nurses, baby consultations and the like. Wherever these are used intelligently the death-rate falls. In Providence it appears that about 200 babies a year have been saved in this way. It costs about $6,000 a year to do it, or $30 per baby.—Chas. V. Chapin, *Am. Jour. Pub. Health.*

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[4] Anderson and Goldberger: Relations of So-Called Brill's Disease to Typhus Fever, Pub. Health Rep., xxvii, No. 9. Reprint 74.

[5] Brill: An Acute Infectious Disease of Unknown Origin, Am. Jour. Med. Sc., April, 1910.

THE SIGNIFICANCE OF OCULAR FINDINGS IN ESTIMATING LONGEVITY *

WILLIAM CAMPBELL POSEY, M.D.
PHILADELPHIA

Since many of the graver morbid processes of the body are attended at some time or other in their course with changes within the eye, it seems extraordinary that life-insurance examiners do not avail themselves oftener of the aid which ophthalmic science offers them.

There is scarcely an organic disease of the nervous system without ocular complications and the earliest signs of circulatory disturbance can frequently be unmasked by the ophthalmoscope. The proper recognition of the initial pupillary changes in tabes and paresis and of a commencing sclerosis of the retinal vessels in Bright's disease might often serve to warn the examiner and to recommend the rejection of an applicant for insurance who manifested no other signs of ill health.

It would be beyond the scope of this paper to attempt an epitome of the ocular symptoms to which disease of the general system may give rise, so I will confine myself to the elucidation of the problem formulated in the questions: "Do any of the morbid processes within the eye, symptomatic of serious disease elsewhere in the body, enable one to draw any conclusions regarding the degree to which that disease may have advanced? And is it possible to form any estimate from them of the probable duration of the life of the person in whom they occur?"

To determine the existence of a disease is one thing; to draw deductions from one's ophthalmic findings regarding the longevity of the individual in whom they occur is another. It is fairly safe to assert, however, that in general, when morbid processes which originate outside the eye produce marked ocular disturbance, the systemic disease causing the lesions must have reached a stage in its development which seriously threatens the health of the individual and renders his tenure of life uncertain. It is not too much for an ophthalmologist to assert, perhaps, that the discovery of hemorrhages in the retina, when not of traumatic origin, in any individual past adolescence, should always be regarded as indicating a serious state of health in the possessor. Most frequently, of course, such hemorrhages are symptomatic of nephritis and, I shall at once, without further preamble, proceed with a description of the ophthalmoscopic findings in that disease.

Among the symptoms of the disease which bears his name, Bright, in 1836, included a disturbance of vision which may often be present before other manifestations of the disease appear. To Heymann, however, in 1856, belongs the honor of describing the first case of albuminuria of the retina in the living subject; though Türck, in 1850, and Virchow, in 1856, had noted anatomic changes in the retinas of eyes in those affected with nephritis. It was not until 1859 that the recognition of the retinitis became wide-spread through the graphic illustrated description of the ophthalmoscopic findings given by Liebreich.

As is well known, albuminuric retinitis occurs most frequently in genuine cases of contracted kidney; that is, in cases in which there is profuse secretion, low specific gravity and little or no albuminuria. In such cases there is usually but little sediment in the urine, with occasional cylindrical casts. As this process often goes on for many years, without apparently affecting the general health, it frequently remains undiscovered. It is in this class of cases that the ophthalmoscopic findings are of paramount importance in revealing a general vascular sclerosis by the discovery of such changes in the retinal vessels.

Retinal changes may also occur in diffuse chronic parenchymatous nephritis, in the so-called large white kidneys, and also in the secondary contracted kidney, which is a sequence of the large white kidney, though not so frequently as in contracted kidney. Finally, several cases are well authenticated in which amyloid degeneration of the kidneys was accompanied by the retinal changes under consideration. Mention need not be made at this time of the not infrequent changes in the retina which accompany the acute nephritis of scarlet fever and pregnancy, or of those which occur in inflammatory conditions of the kidneys secondary to intermittent fever, chronic lead-poisoning, etc.

While it is generally supposed that retinitis appears in and indicates, as a rule, a nephritis of long standing, some authorities believe in the existence of a prealbuminuric retinitis. Such instances have been described by Vance, Hirschberg, Abadie, Gaud and Eyre. These observations, however, as Groenouw has pointed out, can hardly be taken in the sense that the retinal changes precede the nephritis, for this would presuppose both conditions as due to a general derangement, such as a general disease of the vascular system. It is much more likely that the findings indicate that a retinitis may occur with an existing affection of the kidneys before albumin is found in the urine; that is to say, the kidneys may be diseased for some time without the presence of albuminuria, as, for example, has been shown by Litten to be the case in amyloid kidneys. According to Groenouw, a second and more probable explanation of these cases is that albuminuria may sometimes be lacking in contracted kidneys, and if at this stage the patient consults a physician, it is very easy for the latter to mistake the intermittent non-albuminuric condition for a prealbuminuric stage. Finally, it must be remembered that the ophthalmoscopic picture of retinitis albuminuria is in no way characteristic and a similar form of retinitis may occur from other conditions, notably in cerebellar tumor.

In consequence of the importance of this subject, I do not hesitate to quote at length the exhaustive figures which Groenouw has collected to illustrate the frequency with which retinal changes occur in nephritis. Thus retinal changes were found by the following various authors:

Wagner in 6 per cent. of 157 cases.
Frerichs in 15 per cent. of 41 cases.
Lecorché in 22 per cent. of 286 cases.
Eales in 28 per cent. of 100 cases of chronic kidney disease.
Miles Miley in 31 per cent. of 164 cases of acute and chronic kidney disease.
Galezowski in 31 per cent. of 154 cases.

In thirty-three cases of chronic parenchymatous nephritis, Litten found six cases of retinitis albuminurica, making a total of 209 cases of disease of the retina in 939 cases of disease of the kidneys, or 22.4 per cent.

The average age of patients with retinitis albuminurica has been found to be over 40 years, varying, according to Possanner, between 6 and 70 years; and according to Bull between 5 and 78 years. Among forty-five patients Miley found only two below 20 years of age; the greatest number (sixteen) affected were between 40 and 50 years. Schlesinger's figures are from 12½ to 70 years, among forty-two patients. Only one was less than 20 years old, eleven were between 20 and 30, eight

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* Read by invitation before the Philadelphia Medical Examiners Association, March 4, 1913.

between 30 and 40, and twenty-two above 40 years of age. Lawson and Sutherland saw a girl of 12, and Anderson a child of 9 years of age, with retinitis albuminurica. I have studied the retinal changes in a boy of 12 years.

On the whole, the prognostic import of retinitis albuminurica is unfavorable and by far the greater number of persons so affected die before a retrogression of the retinal changes takes place. The prognosis for life is usually hopeless in cases of chronic nephritis, less so in acute, and comparatively favorable in renal disease complicating pregnancy.

In view of its importance, I shall also quote at length the statistics collected by Groenouw regarding the duration of life after the first retinal changes were noticed. These are the following:

> Bull reported 103 cases; 86 of the patients died; 57 within the first year, 18 in the second year, 6 in the third year, 4 in the fourth year, and one in the sixth year of observation, making 87 per cent. in the first two years. Miles Miley, in 164 patients with acute or chronic kidney disease, found 105 with healthy eyes and 51 with retinitis albuminurica (the other 8 had affections of the eyes which are not pertinent to our subject). Twenty-seven per cent. of the former and 53 per cent. of the latter died. The mortality shown among those having retinitis albuminurica was twice as great as among patients with healthy eyes. Most of the patients lived about twelve months after the first indications of retinal changes, two lived nearly fourteen months, and one about eighteen months. In those cases in which the onset of the retinal disturbance could be definitely established, the average duration of life did not exceed six months.

According to Ridley, the average duration of life after the onset of retinitis is about one and one-half years. Snell reports that among 103 patients, 57 died within the first year and 12 within the second year after the appearance of the disease, making 67 per cent. within the first two years.

Among 67,000 cases of diseases of the eye, Possanner found 131 (0.2 per cent.) with retinitis albuminurica. Details were obtainable in 72 cases, 39 in private practice and 33 in his clinical service. Among the 39 private patients of Professor Haab, 23 (59 per cent.) died within two years after the onset of the retinal disease; 62 per cent. of these were men and 54 women. Among those surviving, from two and one-fourth to six years had elapsed for the men and from three and one-half to eleven years for the women since the beginning of the eye trouble. Among 33 patients in the clinic of the University of Zurich, all of the men died within the first two years, as against only 68 per cent. of the women. Four of these were still living at the time Haab made his report, one of them six years after the onset of the disease.

Trousseau was able to obtain data concerning 45 patients having retinitis albuminurica, and of these 3 lived more than four years; 4 beyond three years, and 10 more than two years; thus 28, 62 per cent., died within two years; among these 8 within the first year and 3 during the first six months. One woman aged 24 years died one month after the onset of the retinal disease. Haehnle found that among 98 cases of retinitis albuminurica 56 per cent. died within the first year, 68.4 per cent. in the first two years and 14.3 per cent. after two to nine years. Seventeen patients, 17.3 per cent., were still living at the time the statistics were tabulated; 11 of them two years, and the others from three to six years after the onset of the disease.

According to Groenouw, the prognosis is much aggravated by a detachment of the retina, patients with this complication usually dying very soon. It may be stated in general terms, therefore, that only about one-third of the patients with retinitis albuminurica live more than two years after the appearance of the disturbance; and ophthalmic changes must always be considered an indication of an advanced stage in the progress of the renal disease. As de Schweinitz[1] has well said, however, while the prognosis of albuminuric retinitis will always remain exceedingly grave, it is not unlikely that statistics gathered some years hence will show an improvement, as far as the duration of life is concerned, as compared with the figures cited above. A carefully regulated manner of living, with the best of medical care, may prolong life for many years. I have in mind, at this time, the case of a man of advanced years who is still in fair health, in whom albuminuria and other evidence of renal disease have been present for at least fifteen years.

DIABETES

Of almost equal value to the examiner is the recognition of the ocular symptoms of diabetes. These are many and varied, nearly all the tissues of the eye being affected by glycosuria. The most important, however, are the changes which occur in the ciliary muscle, in the lens and in the retina; for it happens, not infrequently, that the ophthalmologist is the first to direct attention to the existence of diabetes, by the discovery of the more or less characteristic disturbances which glycosuria occasions in these structures.

Authorities differ considerably regarding the frequency of ocular complications in diabetes. Seeger asserts, for example, that they manifest themselves at some period during the progress of the disease in at least two-thirds of all cases. Perhaps the most trustworthy statistics are those of Hirschberg, who found diabetes present in from 1 to 2 per cent. in all of his private cases, while the percentage was much smaller in his hospital practice.

Galezowski found the earliest age at which such diseases of the eye occur to be 9, 14 and 23 years; 27 per cent. were between 50 and 60 years old, and 35 per cent. between 60 and 70 years.

Males are much more likely to be affected; Galezowski's figures indicating 65 per cent. males, Seeger 71 per cent. (99 in 140 diabetics) and Schmidt-Rimpler 79 per cent. (118 men among 150 cases of diabetes).

The prognosis *quoad vitam* in diabetic diseases of the eye is not affected in the same manner as in retinitis albuminurica. It may be said in general terms to be unfavorable in degenerative diseases, less so in hemorrhages, of the retina, while the formation of cataracts cannot be considered as evidence of the rapid progress of the disease.

Opinions differ, however, in regard to the vital prognosis, for while Hirschberg and Schirmer consider the appearance of eye diseases among diabetics as unfavorable, Schmidt-Rimpler is less pessimistic, for he found that though 19 out of 44 diabetics had died within two years after the appearance of the eye trouble, one patient with retinitis was still living after three and one-fourth years, one with chorioretinitis after four years and one with neuritis after five years. One woman of 63 and a man of 66 with cataract were still living after seven years, and a girl, who at 10 years of age developed a diabetic opacity of the crystalline lens, was living nineteen years after the appearance of the eye disease.

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[1] Tyson's Text-Book on Bright's Disease, Ed. 2, p. 210.

It has been my experience, that with proper care, diabetics may live for many years after the development of ocular lesions, and that a proper dietary and regimen not only improve the general condition and lengthen life, but also exert a most favorable influence on the ocular disease, even in some instances causing less opacification of the lens, for diabetic cataract is the one form of cataract which yields in any degree to non-operative measures.

HEART-DISEASE

The ophthalmoscope may also give evidence of the existence of heart-disease; thus in aortic insufficiency there is almost constantly a pulsation of the retinal arteries, synchronous with the radial pulse, and alternating with enlargement of the veins. In fatty heart there is not infrequently extensive disease of the vessels, which may give rise to ocular hemorrhages. It may be of interest to mention, in this connection, that ophthalmologists have been unable to recognize the connection between fatty heart and arcus senilis, all forms of heart-disease being absent in those very cases in which arcus senilis develops at a prematurely early age. Cardiac disease may also manifest itself within the eye in the form of an embolism or thrombosis of the retinal vessels. In aneurysm of the aorta or innominata, vasomotor and oculopupillary sympathetic symptoms are often found on the corresponding side. Initial irritative symptoms give place later to paralytic symptoms.

Individuals on the far side of 65 years, who have had repeated small hemorrhages in the conjunctiva and retina usually die within a few years from cerebral apoplexy. Hasket Derby, for example, followed the life history of thirty-one such patients between the ages of 43 and 83 years and found that almost half died within two years of his first observation and most of them rather suddenly from heart-disease or apoplexy. Raehlman found changes in the retinal vessels in nearly half of all patients with general arterial sclerosis.

Lead, tobacco and alcohol often reveal their toxicity in the fundus oculi, and syphilis can affect almost all of the structures of the eye. Tuberculosis also has its ocular manifestations.

It would require a far greater knowledge of neurology and psychiatry than I possess to prognosticate how long a man may live after the pathologic processes which induce paresis are sufficiently well established to induce ocular changes; yet it would seem that the most sanguine examiner would hesitate to recommend a man with this disease as a safe risk. In this insidious disease, in which initial symptoms are usually those of a purely functional disturbance, the recognition of the earliest physical signs should be of the greatest importance. These are often ocular and if recognized and appreciated should be of the greatest aid in diagnosis. It is at this time that failing vision is complained of, and while in some instances this may be dependent on atrophic changes already present in the nerve, in most instances it will be found to be in the nature of a slight degree of amblyopia, which on careful functional testing will be found to be of psychic origin; as Dercum[2] has pointed out, a kind of visual hyperesthesia quite in keeping with the general psychic disturbance which is setting in, in conjunction also with the lessening of general cutaneous sensibility which is always noted sooner or later. Even at this time, pupillary irregularity may be noted. Difference in the size of the pupils, one should remember, may occur physiologically, but in such cases this difference is usually slight. To quote Dercum:[2]

> If, however, a difference in the size of the pupils be noted and this difference is associated with a sluggishness to light reaction, or if the pupils, being equal, react slightly differently to light, the finding is suggestive with regard to paresis in its incipiency. In the early stages of paresis, indeed, a difference in the promptness of the response to light reaction between the right and left pupils is almost the rule. Likewise an impairment of the consensual light reaction may be the first symptom of a pupillary disorder in paresis, and it is of the same value as a difference of reaction of the two pupils.

Aside from the bearing ocular findings have on the special question of life expectation, it would seem to me that examiners should give more consideration to the degree of visual acuity possessed by applicants for insurance, for even partial loss of sight may disqualify a man from earning his livelihood, thereby affecting his insurability, by reason of the financial risk of his not being able to pay his premiums. It surely would be advantageous to the insurance officers to be informed that when the company is asked to insure the life of Mr. X., for example, that though in good health otherwise, the examiner found commencing cataracts or evidence of glaucoma or optic atrophy, conditions not necessarily affecting longevity, but all progressive ocular lesions, which in all likelihood would so interfere with vision that within ten years or even less, his earning capacity would be greatly jeopardized.

Defective visual acuity or ability not infrequently relegates men to a position far below that which their natural attainments would have won for them. In this connection I may mention the case of a brilliant railway engineer who to all appearance should soon take much higher rank with its equivalently increased pay, but who will doubtless be denied promotion on account of poor vision consequent on congenital cataracts. The examiner and the agent who would recommend this man for a large policy in anticipation of increased earning power, would therefore be in error. There are, of course, some men whose genius transcends all physical limitations. Insurance companies, however, doubtless desire to be guided in their consideration of the case of the average man.

SEXUAL NEURASTHENIA IN MEN

ALBERT J. UNDERHILL, M.D.
BALTIMORE

The relationship existing between the reflex genital centers in the spinal cord and the psychic centers in the brain is such that the changes, physiologic or morbid, in the one are inevitably reflected in the other. This mutual dependence is indicated on the one hand by the influence on the reproductive organs of thoughts and images which may originate in the cortex or are brought to light from memories, and on the other hand by sexual thoughts or dreams which are aroused by the stimuli incited by the accumulation of secretions in the reproductive glands or by other peripheral stimulation.

If the coordination or poise which exists between the local nervous structures and those with which they are connected by sensory reflex tracts in the cortex is disturbed, certain alterations in the mental attitude are perceived which in those predisposed result in the condition known as sexual neurasthenia. These alterations may come about as the result of morbid changes in the genito-urinary tract or of conditions in the cortex cerebri and sympathetic nervous system, thus dividing the cases into two distinct groups.

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[2] Dercum: In Posey and Spiller's "The Eye and the Nervous System," p. 479.

The first group (which forms the subject of this article) includes instances of primary sexual neurasthenia or those which arise from conditions in the organs of reproduction.

The second group is made up of cases resulting from conditions in the cortex and sympathetic nervous system. They form primarily the picture of general neurasthenia in which the sexual element appears as one of the subordinate or later features in that disease. This group of cases concerns the neurologist only. In instances, however, where a lesion can be demonstrated in the reproductive tract, as is sometimes the case, it should be eradicated, as one which would otherwise produce no symptoms will, in the irritable condition of the sympathetic nerves present in general neurasthenia, assert itself. I shall treat here of cases coming under the first group, those which arise from local conditions in the reproductive organs.

These organs have been shown by Lovén, Goltz, Eckhard and others to be richly supplied with peripheral nerve ganglia which are connected with the spinal centers and with the centers in the cortex through reflex and direct tracts; these in turn being connected with the centers controlling the organs of special sense and with the different paths of association.

When it is considered that they are so well supplied with sensory and motor nerves, and that the changes, secretory, psychic, vascular and nervous, which accompany the physiology of these parts, are so complex and completely under nervous control, it is not surprising that we find the nervous factor playing an important rôle in the disorders of this region. When it is realized in addition that these are the agencies for the consummation of the strongest of human instincts, we begin to comprehend the close relationship between the psychic and physical which these organs, both in health and disease, serve especially to emphasize, and how abnormalities, either fancied or real, may be reflected not only in the mind but in the very features even of the individual concerned.

For instance, a man came into the outpatient department of the hospital a short time since who in answer to my query stated that he had noticed a few days previously that one of his testicles hung lower than the other. Since his "discovery" he had been sexually impotent, although he had been perfectly potent prior to that time. While speaking his chin had a marked tremor, his teeth chattered, beads of perspiration stood on his forehead and he was a picture of apprehension. On examination the skin of the penis was found crinkled into fine folds, as was also the mucous membrane of the glans. The penis had a withered look and the appearance of trying to draw itself into the pelvic cavity. The scrotum was very lax. The patient gave no history of venereal disease, but the mucous membrane of the anterior and posterior urethrae was blanched and the verumontanum was shrunken, seemingly bloodless, and almost insensitive to the touch of the endoscopic tube.

There were no lesions present either here or in the prostate or vesicles, the secretions of which were normal microscopically. Here is a marked visible example of the influence of the mind over the sexual apparatus, a vasoconstrictor effect which shows itself in the paleness of the mucous membrane and even in a loss of tone in the muscles of the scrotum and penis. The influence of fright and other strong emotions in inhibiting the power of erection is too well known for comment. It cannot be doubted, however, that this man presents fertile ground for sexual neurasthenia should a genital lesion be present; however slight it might be, it probably would be all that is necessary.

These patients with unanimity impute their lack of ambition and failure of achievement in the ordinary affairs of life to their disease. This manifests itself subjectively in insomnia, dyspepsia, disinclination to make any effort, mental or physical, and pains in the back, loins or legs. Associated with these at times are symptoms referable to the bladder, namely, frequency of micturition, burning on urination, pain over the pubic region and interruption of the flow of urine or inability to pass it under certain conditions. Added to these symptoms are sensations of itching, pain or numbness in the course of the distribution of the genitocrural and ilio-inguinal nerves in the thigh, scrotum and penis. To these symptoms, if unrelieved, will later be added those of general neurasthenia, in the picture of which the sexual origin of the trouble may be more or less obscured.

In connection with these subjective symptoms we may recall that the hypogastric plexus of the sympathetic nervous system, through the medium of the hemorrhoidal vesicle and prostatic plexuses, supplies the bladder, seminal vesicles, vas deferens, prostate and rectum. Branches are also sent from the prostatic plexus to the erectile tissues of the penis. The hypogastric is joined by filaments from the intermesenteric plexus and it is probable that many of these abdominal and pelvic symptoms, which we have hitherto associated with purely mental or neurasthenic causes, are actually neuroses transmitted along the different anastomosing branches of the hypogastric plexus from some local focus.

A striking symptom which I have noted in two of my cases (see report of Case 2) was pain in the left iliac region. It was intense, more or less constant, and aching in character; taken in connection with the bladder symptoms, it gave rise to a suspicion of urethral stone. The examination by Roentgen ray, urethral catheterization, etc., was negative. Both of these patients had lost the power of erection. It is significant that the nervi erigentes, arising from the first, second and third sacral nerves, pass to the hypogastric plexus and hence are distributed to the descending colon, rectum, anus and genital organs. As the mechanism of erection is a vasodilator phenomenon, and the pain complained of, coincidently with the complaint of the failure of this event, followed the paths of these branches, which supply the vasodilator fibers to the penis in common with the above abdominal and pelvic parts, it is possible that the pain and impotence complained of in the above two cases were due to a lesion in some one or more of the parts supplied by these nerves. Such lesion acts either directly or through a reflex inhibition of the vasodilator center in some instances or, as we shall see, through exhaustion of this center by constant irritation and overstimulation. In this connection may also be mentioned the stimulation of the sexual centers caused by hemorrhoids, fissures of the anus, parasites and other affections of the anus and rectum.

The cases of sexual neurasthenia which I have seen have all shown lesions in some part of the reproductive tract. Doubtless had the lesions not been found they would have eventually gone on to general neurasthenia and the original source of the trouble been more or less obscured. At times the lesion was minute, but, however slight, its clearing up, under treatment directed to it alone, was marked by improvement in the general symptoms; indeed, the fact which is most striking is the coincidence in the improvement between the physical signs and the sensory symptoms. Such changes in the mental attitude cannot be altogether due to suggestive therapeutics, for suggestion alone when applied to local treatment does not produce the same result. That there is an intimate connection between the higher centers of the cortex and those which control the vascular phenomena, especially of the reproductive organs, our everyday experiences teach us. So if a local lesion, in a part as richly supplied with peripheral ganglia as the posterior urethra, prostate and other parts of this region, should inhibit the vasodilator nerves or produce the symptoms of neurasthenia it is no more surprising than the complaints of a neurasthenic character which may be caused by a phymosis with adhesions.

The objective signs usually given by these patients are spermatorrhea, prostatorrhea, seminal emissions, and impotence, either partial, complete or relative.

The spermatorrhea may or may not be visible to the patient. Two patients had never noticed any discharge at the meatus, but the urine was turbid, and the turbidity proved to be due to large numbers of spermatozoa. The patients had noticed a decrease in their sexual powers; both had a history of preceding attacks of gonorrhea. The spermatorrhea may be due to atony of the sphincters controlling the ejaculatory ducts owing to previous or existing disease, or to injury to the nerve-supply caused by disease or by overstimulation from masturbation, sexual excesses, or possibly as a result of constitutional causes. Under these conditions the pressure from outside agencies, rectal or abdominal, or even a full bladder, may cause an escape of the contents of the ampullae of Henle, seminal vesicles, or prostate. I have seen an escape of fluid from the prostatic utricle and a discharge from the ejaculatory ducts not unlike the flow of urine from a ureter, when a rough movement of the endoscopic tube caused a contraction of the muscles. The secretion in this instance contained dead spermatozoa and pus and the patient was totally impotent.

The same reasons may hold good in prostatorrhea. The discharge seen by many patients is not prostatic fluid, however, but the contents of overactive urethral and Cowper's glands. Microscopic examination will distinguish between the secretions of the prostate and the other secretions.

The most general complaint from these patients is impotence, partial or complete. Two main factors may be concerned in this: the local condition and the mental. The lesion in the genito-urinary tract by acting reflexly on the vasodilator and ejaculatory centers may act on the one hand by overstimulation, leading to premature ejaculation and seminal emissions or on the other hand by inhibition, as shown by the loss of the power of erection. The latter result will also eventually be brought about by the conditions causing overstimulation as the ejaculatory and vasodilator centers become exhausted or the growth of connective tissue through its effect on the nerve endings dulls the sensibility of the mucous membrane of the posterior urethra. The effect of the tonic activity of the vasoconstrictors is then seen in the characteristic shrinking, withered appearance of the penis which many of these patients show.

The endoscopic picture of the posterior urethra in these cases bears out this distinction. I do not cocainize the urethra or use any local anesthetic, as this may constrict the blood-vessels of the mucous membrane and modify the picture. I use a small tube, No. 23 or 24, so as to exclude as far as possible the local anemia caused by its pressure. The end of the tube is slightly rounded and at right angles to the length and, in observing the color of the mucous membrane, is kept as nearly as possible parallel with the long axis of the urethra. If care is used the proceeding is practically painless.

According to the appearance of the mucous membrane two types may in general be recognized: one hyperemic congested and hyperesthetic, characterized by frequent pollutions and premature ejaculations; the other anemic and of lessened sensibility, characterized by diminished or complete loss of the power of erection. The change most often seen in the posterior urethra is an infiltration of connective tissue, which is usually the end-result of a preceding inflammation. This in itself is sufficient to dull the sensibility of the posterior urethra and diminish the peripheral stimuli to the genital centers in the cord.

The verumontanum appears to be the point of predilection for these changes, as they appear most marked in this situation. Like the external genitalia there is a great variation in the size and appearance of this prominence in different individuals. In general it corresponds in size and vascularity with the external organs of reproduction of the person concerned, but it is only by observing large numbers that the fine distinction between the normal and abnormal can be detected in doubtful cases. The alterations can be seen in a dulling of the surface of the mucous membrane caused by the denudation of epithelium, changes in the color and frequently in deformity of this eminence. This deformity may appear as fibrous nodules or an infiltration which diminishes the volume of the part as a whole, and may also show in distortion and displacement of the openings of the prostatic utricle and ejaculatory ducts. Other conditions, such as papillomas and fissures, have been described as giving rise to neurasthenic symptoms.

I saw a case in which there was a minute cyst, the color and size of a seed pearl, situated in the angle between the base of the verumontanum and the floor of the urethra. The small extent of some of these changes in the posterior urethra is out of all proportion to the disturbances they create and associated with or exclusive of them may be pathologic conditions in the prostate. seminal vesicles and ampullae of Henle. Such infections may result by direct extension from a urethritis, specific or non-specific, or may be carried to these parts through the blood- or lymph-channels; and until such infection or other morbid condition obtains I am skeptical as to the possibility of the existence of primary sexual neurasthenia.

That coitus is not a necessary antecedent to an infection of these glands is shown by two patients whom I have under my care at the present time. They are typical sexual neurasthenics who have never had sexual intercourse, one because of premature ejaculations, the other because he had never had an erection; and yet the prostatic secretions contain quantities of pus. Both patients admit masturbation. It is probable that frequent masturbation through the resulting oft-repeated congestion lowers the resistance of the glands and prepares a favorable soil for infection from the circulation or from the organisms normally inhabiting the urethra. However this may be, such instances arouse a doubt as to the possibility of sexual neurasthenia without causative morbid changes.

The impotence of which many sexual neurasthenics complain is in the beginning probably purely organic; that is, due to an inhibition of the sexual centers as a result of reflexes from the lesions in the genital tract. This after the first failure at coitus acquires a psychic element; subsequent attempts add to the degree of the psychic feature, which in some instances disappears with the improvement in the subjective and objective symptoms, while in other patients of a more neurotic temperament it remains after the neurasthenia *per se* is cured. This must then be dealt with as a purely mental condition, in the treatment of which the circumstances, surroundings and disposition of the patient must all be taken into consideration.

The attention of an individual of neuropathic type is quickly attracted to any personal abnormality either fancied or real. This is all the more so when it concerns structures so intimately bound up with the emotional side of life as the reproductive organs. Such a person is given to introspection and the appearance of a neurosis or a spermatorrhea or a prostatorrhea or nocturnal pollutions quickly arouses his apprehension. He begins to speculate as to the cause; he may have guilty knowledge of former indiscretions or vices; possibly he has noticed a decrease in his libido sexualis due to his spermatorrhea, which prevents the sexual glands from becoming distended and so removes the stimulus their distention normally provokes. He may have attempted intercourse and been unsuccessful or failed to come up to his expectations; he recalls the horrors he has read of in "literature" devoted to the evils of youthful indiscretions, masturbation and like pastimes. His attention attracted, he looks for further evidences of disease. The pain which has an anatomic basis in some morbid condition in the genito-urinary tract and which may be slight in the beginning, as the victim's attention is fixed on it, increases as all pains do under these circumstances and it becomes to a degree an obsession. This in turn increases the mental depression; and what was originally a neuralgia which could be traced to a definite lesion, by reason of the continued depression and consequent worry and sleeplessness, all of which add to the nerve exhaustion, develops into neurasthenia which, localized at first as sexual, becomes generalized as the sympathetic nervous system succumbs to the continually increasing despondency. Nervous dyspepsia, headaches, insomnia and the train of symptoms characteristic of general neurasthenia follow.

Those who have noted many of these sexual neurasthenics will agree that their appearance and bearing are often characteristic. They have, as a rule, the demeanor of timidity, lack of resolution, hesitancy and self-effacement. They must be questioned guardedly, and until their full confidence is won a satisfactory history cannot be obtained. They realize that in the eyes of many of their fellows the measure of manhood is gaged largely by the sexual characteristics. The very nature of their own trouble tends to exaggerate in their minds the importance of these traits and they watch jealously for the expression of countenance or of words which betoken ridicule. In the course of their treatment they will ask numerous questions which if answered indirectly will confirm their worst suspicions as to the prognosis. They will go far in their interpretation of an answer to pick a negative word or meaning out of the reply, and for this reason a negative word or an indirect meaning must be avoided in the answers to their questions. If a definite time is set for their recovery, on the other hand, and the expected result does not follow, they are cast into deeper depths than originally. Through it all they are reaching out for a hope; every favorable sign, one which would not be perceptible to the normal individual, they grasp eagerly and as eagerly search for the (to them) unfavorable symptom which sinks them still deeper in the mire. So the conflict continues between the positive and the negative, between hope and despondency, until the one gradually overcomes the other and the intervals of encouragement become more frequent and longer drawn out, when the realization of recovery will often come with the suddenness of a shock.

The local treatment is that of the pathologic condition found to be present. The most usual site of this is in the prostatic urethra which presupposes, in many instances of infection, accompanying infection of the prostate and seminal vesicles. The changes in the posterior urethra are connective-tissue infiltration, papillomas, cysts, ulcerations and fissures of the verumontanum, calculi and chronic inflammatory changes of various sorts. A case which I will report in greater detail in the future (as the patient is still under treatment) has a growth within the lumen of the prostatic utricle which protrudes through the separated lips of this part. A portion curetted for microscopic examination shows the structure of a polyp. A detailed description of the treatment of these various changes is beyond the scope of this article. It may suffice to say that they may be treated with posterior dilatations, local applications of silver nitrate (solid or in solutions of 5 or 10 per cent. strength), 5 per cent. salicylic ointment, tincture of iodin, and removal of the growths or calculi if any are present.

Most of this work in the prostatic urethra can be done through the endoscope. Applications should always be made in this way, as it is only by this means that injury to healthy parts can be avoided. None of the pain, discomfort and urinary disturbances which so often follow instillations and such other blind modes of treatment of these conditions result when this method is used. Aside from this the delicacy of the nerve endings, which are so important to the unimpaired preservation of the sexual characteristics and the injury of which gives rise to many neuroses, is respected. For the diffuse connective-tissue changes the posterior dilator is useful. For those localized in the verumontanum I have found tincture of iodin to be most useful in the majority of cases, any excess being swabbed up before withdrawal of the instrument. The treatment of the various subsidiary glands is laid down in the text-books and more recent articles on infections of these glands.

The patients will improve mentally as the lesions are eradicated and, with few exceptions, no special mental treatment is necessary provided they are not discouraged by thoughtless statements, which can be avoided easily if one takes into consideration the state of the patient's mind.

The following cases will illustrate:

Case 1.—J. B., farmer, aged 57, unmarried; entered the hospital June 20, 1912, complaining of "sexual exhaustion and extreme nervousness." June 30, he was referred by the nervous department to the genito-urinary department for treatment. Father died of paralysis, aged about 60; otherwise family history was of no importance except that the patient stated that the members had "a tendency to nervous affections."

Past History.—Patient has had minor ailments only: nervous dyspepsia for past twelve years, for which he has treated himself. He denies gonorrhea, syphilis, or any venereal disease whatever; admits masturbation at intervals until two years ago. He has never had sexual intercourse, as ejaculation has invariably occurred before intromission. For this reason patient gave up attempts many years ago. Caressing opposite sex has always resulted in spontaneous ejaculation. He has had nightly emissions for many years. During the summer of 1910 he entered a hospital in another city because of these emissions and the resulting nervous exhaustion, which incapacitated him for work. While there he states that he received bromids, strychnin and mental treatment, without effect, however.

Five months preceding present examination he began to have diurnal emissions also, which increased in number until he would have as many as eight during the twenty-four hours. They were usually accompanied by a partial erection and orgasm, although recently the sensation was much modified. He suffers with pains across the back and loins, dyspepsia, sensations of tingling in the glans penis, profuse sweats, general exhaustion and nervousness. He is very anxious about his condition and is unable to apply himself either mentally or physically.

Examination.—General: Poorly nourished, apathetic and feeble in bearing; appears to be 70 years of age. Reflexes, both superficial and deep, exaggerated. Local: External genitalia well formed, cremasteric reflex very active; no discharge from meatus. Urine (3 glasses) clear and negative both microscopically and chemically. Endoscopic: Posterior urethra deep purple in color, extremely sensitive to the touch, bleeds readily when swabbed. Mucous membrane on the floor of the prostatic urethra has the appearance of being lifted from the submucous layer; surface very irregular, covered with coarse granulations, and the normal folds obliterated. Verumontanum small and cyanotic in appearance, surface covered with granulations. No pus in the catheterized contents of the sinus pocularis. Prostate and seminal vesicles negative.

Treatment and Results.—Posterior urethra was swabbed twice with a solution of 10 per cent. silver nitrate through the endoscopic tube, an interval of a week elapsing between the two applications. Following this at intervals of five days the posterior urethra was dilated with a Kollman posterior dilator. Patient showed improvement from the beginning of the treatment and had but one emission during the next six weeks, at the end of which time the urethra appeared practically normal.

The patient left the hospital Aug. 13, 1912, stating that he felt perfectly well.

I heard from this patient a few days ago. He wrote that he had gained 40 pounds in weight, was entirely cured of his disease, and had had no indications of a return.

Case 2.—J. C., fireman, aged 39, married, complained of "impotence and loss of sexual desire." I first saw him April 3, 1911.

History.—Family history was negative. Patient had had concussion of the brain five years previously. Six months afterward he had awakened on the street one day several miles from home and could not recall what had happened in the interval since leaving home several hours before. In 1906 he had had a severe attack of gonorrhea, since which time he had been unable to have an erection. He attributed this to the fact that his wife discouraged his advances; he acknowledged, however, that he had been equally unsuccessful with a woman whom he thought sexually congenial. He complained of headaches, insomnia, dyspepsia and nervousness; at times for the past six months before his appearance for treatment he had a continual aching pain in his left iliac region accompanied by a sense of what he described as "nothingness" in the region of his external genitalia. He stated that his penis was shrunken and looked like a "grub worm" when he felt this pain; he also had frequency of micturition and burning at such times.

Examination.—Cystoscopy, ureteral catheterization, roentgenoscopy, etc., of bladder for stone was negative. Endoscope showed the verumontanum to be the seat of a fibrous transformation. It was nodular, and the entrance of sinus pocularis was contracted so that it would with difficulty admit a very fine probe. The whole posterior urethra was infiltrated with connective tissue and practically insensitive to the touch. When prostate and seminal vesicles were stripped, plugs of brown fibrinous material half an inch in length were expressed with a quantity of pus. The normal constituents of these secretions appeared to be absent with the exception of a few spermatozoa which were motionless.

Treatment.—This patient made a slow recovery after prostatic massage twice a week for six months, posterior dilatations at intervals of five days for ten weeks and local applications of tincture of iodin through the endoscopic tube at weekly intervals until February, 1912, when he was discharged.

At present he states that he is cured as far as his nervous symptoms are concerned. Sexually he is at times impotent when with his wife, although he confesses that he has no difficulty with other women.

This is one of those unfortunate cases of relative impotence which is psychic and due no doubt to lack of sexual congeniality. As the physician cannot increase the element of brute in the male which would be necessary to overcome the mental inhibition of the sexual centers caused by the knowledge of the repugnance of the female to sexual contact, he can do little in this class of cases, as respects the relations of the patient with the female.

Case 3.—H. S., fireman, married; complained May 4, 1911, of insomnia and general nervousness.

History.—Both family and past history are negative except that patient had had a chronic diarrhea for fourteen years; in going to and from work he followed a certain route on which were saloons and barber-shops where he could use a water-closet, as otherwise he would soil his clothing with feces. He denied any previous venereal infection of any character. During the two years preceding his appearance for treatment he had been unable to sleep more than one or two hours out of the twenty-four; then only when utterly exhausted. Lately he had been easily frightened, startled by any sudden noise and had been compelled to give up his work on account of his extreme nervousness. He was troubled with headaches, backaches, nervous dyspepsia. He had been treated for years for his diarrhea, but without effect, until he had finally given it up through discouragement. He urinated but once or twice during the twenty-four hours and then passed only a very small quantity.

Examination.—Urine was clear—no shreds—negative chemically. Centrifuged specimen showed a few red blood-corpuscles. A stricture which would admit nothing larger than a filiform was found in the membranous urethra.

Treatment.—Dilatation of the stricture completely relieved the conditions including the diarrhea. Patient stated that he had the first solid stool in many years and subsequent to his treatment was at times compelled to take a laxative. The other symptoms disappeared in three weeks. He has had no recurrences.

Case 4.—H. H. H., clerk, aged 28, unmarried, complains of sexual weakness and nervousness.

History.—Patient states that members of his family always had nervous dispositions; family history is otherwise negative. Patient has never been sick. He denies venereal infection of any character whatever; has never indulged in coitus for the reason that he has never had an erection sufficiently complete to make intromission. For the past five years he has had considerable pain in the loins; insomnia which he attributes to worry over his condition; is easily fatigued and is increasingly nervous. He admits masturbation, but attributes his condition to some experiences he had when a boy with a woman considerably older than himself.

Examination.—Nov. 25, 1910: General: Patient very reserved, shy, hesitating, irresolute in bearing and anemic. Reflexes, both superficial and deep, exaggerated. Local: There was no discharge from the meatus. Urine was clear, but centrifuged specimen showed numbers of spermatozoa. Endoscope showed a very pale posterior urethra, the mucous membrane of which was distinctly anesthetic. The tube could be passed and moved about freely without causing pain or bleeding, as is the case with normal urethrae. The ejaculatory ducts discharged a gelatinous substance containing nonmotile spermatozoa into the end of the tube as it was withdrawn past their orifices; this substance also showed numerous pus-cells, as did the secretion from the prostate expressed at a subsequent visit. The right seminal vesicle was distinctly palpable and tender on pressure.

Treatment and Results.—He recovered under massage of the prostate and seminal vesicles and applications of salicylic ointment (5 per cent.) to the posterior urethra, the applications being made at intervals of a week.

He was discharged in July, 1911, and has had up to the present time no indications of recurrence.

Case 5.—G. A. H., *contractor, unmarried*; complained of impotence, feeling of numbness from his waist down, insomnia, "sticking sensation" in his perineum, nervousness.

History.—Patient had had a severe attack of gonorrhea some years previously, accompanied by hemorrhage from the urethra; otherwise past history was negative, as was the family history.

Examination.—Oct. 8, 1911. The conditions present were chronic prostatitis, seminal vesiculitis and fibrosis of the verumontanum, the base of which was contracted so that the part had the appearance of a pedunculated tumor. The openings of the ejaculatory ducts projected from the surface of the mucous membrane, which seemed to have contracted about them.

Treatment.—The prostate and seminal vesicles were massaged twice weekly for ten weeks, at the end of which time the glands and their secretion appeared to be normal. The verumontanum was then swabbed every seven days with tincture of iodin and during the latter part of the treatment every fourteen days. The application of this was at first painless, but the part increased in sensibility as its appearance became normal and in the latter part of the treatment became quite sensitive. The applications of iodin were, of course, made through the endoscope. The patient was discharged in April, 1912.

Case 6.—W. C. M., decorator, aged 25, unmarried, complained of "masturbation."

History.—Father is an alcoholic; eldest sister has "St. Vitus" dance. Patient had typhoid fifteen years ago; denies ever having had gonorrhea or venereal sores of any character. Right testicle was injured eight years previously, swollen for three days, and then became apparently normal. Patient states that he has always been "nervous" and easily excited. He has never had a complete erection, but when he was sexually excited would cross his legs and an emission would follow; this occurred pretty regularly every other day. He had insomnia, vertigo, pains in the back and loins; was exhausted easily; could neither make mental effort nor concentrate his thoughts on any one subject for more than a few minutes at a time.

Examination.—No discharge from the meatus. Urine negative microscopically and chemically. Urethral mucous membrane (posterior) abnormally pale in color and relatively insensitive to the touch; otherwise negative. Prostate very large, firm, symmetrical; no adhesions; median furrow present; no areas of induration; very sensitive to pressure. Large quantities of pus in the secretion expressed from the prostate. Seminal vesicles negative on palpation.

Treatment and Results.—When the prostate was massaged the patient had a vigorous erection, the first one, so he stated, that he had ever experienced. He has improved steadily both subjectively and objectively under treatment, which consists simply of prostatic massage twice weekly. Three months after the institution of treatment he had a successful coitus. This was the first he had ever experienced, although he had tried a number of times before appearing for treatment. His pains, insomnia and other subjective symptoms disappeared within eight weeks after starting treatment.

CONCLUSIONS

1. Sexual neurasthenia is always due to definite pathologic conditions in the genito-urinary tract.
2. The lesions may be in any part of this tract.
3. Because of the exceptionally rich supply of sensory nerve-endings in the prostatic urethra, the changes in this part, especially in the vicinity of the verumontanum, are most apt to give rise to this type of neurasthenia.
4. The conditions give rise primarily to a local neuritis or neuralgia which is the intermediate cause of the neurasthenia.
5. There may be in certain instances a toxic element which reduces the resistance of the sympathetic nervous system. This is especially true of infections of the seminal vesicles or prostate.
6. The condition is most apt to occur in those of hereditary or acquired neuropathic disposition.
7. The physical impotence resulting in many of these cases acquires a psychic element in the course of the disease which must be dealt with as a separate entity after the removal of the primary cause.

Charles and Lafayette Avenue.

THE TEACHING OF PSYCHIATRY

A REPLY TO DRS. BURR AND DERCUM

H. DOUGLAS SINGER, M.D., M.R.C.P.
Director of the Illinois State Psychopathic Institute
KANKAKEE, ILL.

The awakening of interest in the problems of insanity is leading to the recognition of the need for training the medical student in this important branch of medicine. In introducing this topic into the curriculum it is all-important that proper consideration be given to outlining the course of instruction. There recently appeared in The Journal two articles on the teaching of psychiatry by authors[1] whose names and deserved reputations must lend great weight to any cause they may champion. Inasmuch as they express extreme views it would not be untimely, it appears to me, to discuss and criticize the attitude taken.

In both papers the most striking feature is the wholesale condemnation of modern psychology, which both authors seem to consider as more or less synonymous with the Freudian theories. To Dr. Burr, who justly points out that the older psychology "does not make the study of psychiatry any easier or any clearer," the "newest psychology" is the "filthiest possible explanation of mental disturbance." If it is an explanation at all the use of such epithets is surely unnecessary and does not throw any new light on the problem. The detailed study of the stools, which is essential in some diseases, might well be called filthy, and yet it is not omitted for that reason, nor do those who perform the work become thereby contaminated. Dr. Burr adds that "surely the sexual element in insanity is large enough"; but apparently he thinks this sufficient reason for leaving it alone in disgust and not an indication for closer study.

Both authors seem to see in the Freudian doctrines nothing but "a means of mental cure." Dr. Dercum is satisfied with scoffing at the thought of spending from six months to three years in the study and treatment of a case, while he leaves it to be assumed that the patient could easily be "cured" in much less time by some other method of therapeutics, as if that demonstrated the falsity of Freud's conclusions and methods of study. He tells us also that the Freudian theory applied to dementia praecox is as old as the description of a disorder under that name by Kahlbaum and Hecker. Whether he intends thereby to imply that he concedes its truth or brands its falsity he does not make clear.

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[1] Burr, C. W.: The Teaching of Psychiatry; and Dercum, F. X.: The Teaching of Insanity, The Journal A. M. A., April 5, 1913, pp. 1054-1057.

Whether we accept the extreme developments of the Freudian school or not there are involved in Freud's conceptions certain broad principles which are well founded in fact and are not in any way invalidated by the application he makes of them. These principles are not original with him, but it must be conceded that his work has done much to crystallize and clarify our views on a biologic basis, even if only, as some think, by giving rise to study and discussion.

All this has nothing to do with the question at issue, however, for no one has yet suggested that an attempt be made to teach the Freudian doctrines to medical students. This does not mean that therefore psychology should be excluded from the curriculum. One does not cut down an apple-tree because there have been grafted on it certain branches which bear fruit not to his liking. It is as impossible to teach psychiatry (abnormal cerebral functioning) without a basis of psychology (normal cerebral functioning) as it is to teach pathology without knowledge of physiology. If only the fundamental facts of the integrations in the lower unconscious nervous activities (Sherrington) were grasped as a foundation for the understanding of the corresponding conscious activities of the brain, many of the objections would be overcome. That stimulus which is of greatest importance to the welfare of the individual and species has a prepotent control over the effector mechanism of the body through the cerebral associative pathways just as it has through the spinomedullary connections. This principle must necessarily imply the overwhelming potency of problems of self- and race-preservation in conscious reactions (brain in action) as in reflexes.

The sole purpose underlying cerebral evolution, like all other evolution, is that of enabling the individual better to take advantage of his surroundings for the preservation of himself and his kind. Of these two ends, the latter, in adult man as in lower animals and even plants, is by far the more important. Hence we need not be surprised to find that disorder of the mind is present when these fundamental aims of life cannot be adequately accomplished. To put this in another way, the individual who is, for any reason, unequal to a suitable adjustment in the struggle for the satisfaction of his desires, these expressing only the biologic needs of self- and race-preservation, is abnormal. The clinical picture presented as the result of this failure to meet conditions will vary with the adjustments which the individual does make; for it is evident that since the prime laws of all living matter are those of self- and race-preservation some adjustment must always take place. These may be more or less unsuited to the purpose to which they are applied and their particular form will be determined by the nervous mechanisms present, whether inherited or developed by personal experience. Disease of the nervous system will, of course, act by interfering with the nervous associations. Some of the maladjustments arising from disease or faulty make-up represent what we call insanity.

A bridge will carry a certain load and will break down under a heavier burden. This is not necessarily due to rusting (disease) of its parts but may result simply from a demand beyond its strength. Why should we, then, hesitate to admit that some individuals are so constructed as to be incapable of withstanding the stress and strain of even an everyday life in the complex conditions of society? And why should we, with Dr. Burr, insist on "the fact that insanity is a disease just as typhoid fever and tuberculosis are diseases"? It is such conceptions as this which render it necessary for Dr. Burr to complain that "gentlemen who write popular articles for the magazines have impregnated the public with the idea that adenoids, lateral spinal curvature, ocular defect and other like things are the cause of all insanity."

Dr. Dercum especially emphasizes the "unfortunate tendency at present toward speculative psychology." It seems at least equally unfortunate that there should be also such a tendency to speculative pathology. By all means teach the *facts* of pathology which to be honestly carried out must include the facts of failures in adjustment as well as of disease processes; but let us avoid speculative relations to internal medicine as we do speculative psychology. In a recent article Dr. Dercum points out some admittedly hypothetical relations between dementia praecox and insufficiency of the adrenal system. Other authors (Berkeley) have advised, and successfully (*sic*) performed, the removal of part of the thyroid for the same disease on the equally tenable (or untenable) hypothesis of there being a hyperactivity of this system. Even the correlation between liability to dementia praecox and to tuberculosis, on which Dr. Dercum lays so much stress, is far from adequately demonstrated. It is not true that the great majority of dementia praecox patients die of tuberculosis, otherwise there would be no need for our huge hospitals for the insane, of which the vast majority of the inmates are in the terminal stages of dementia praecox. These individuals usually die of old age or some of its accompanying diseases. Bleuler makes the emphatic statement that the percentage of dementia praecox patients dying from tuberculosis in his clinic is not greater than that of the general population in the regions from which the patients are drawn. Even were the opposite a demonstrated fact it would not in any way prove that the ductless glands had anything to do with the development of the mental disorder.

The correlation with a liability to infection with tuberculosis would, even if proved, show nothing beyond the possibility that a body ill adapted to adjust itself to the complex conditions under which it has to conform to its biologic needs may be also ill adapted to cope with the micro-organisms which are part of its environment. It would be only another index of faulty make-up, exactly comparable with the instability shown by similar individuals in adjusting themselves to alcohol and other toxins.

If one were to judge from the articles by Dr. Dercum, one would be led to the conclusion that he believes that emotion, delusions, etc., are the result of faulty glandular activity. According to this line of reasoning a man would become angry and strike because his thyroid or some other gland was not functioning properly, and not because the situation in which he found himself called for this as an adequate response. Surely the more reasonable view is that the adrenal system cooperates with the rest of the body in making adjustment to the situation. This is expressed consciously as what we call a feeling of anger. Disorder of adjustment might then quite well be accompanied, without being caused, by disorder in the function, not merely of the adrenal system, but of the whole body.

The psychology of the insane is in no wise a different subject from that of the sane. Thoughts, delusions, hallucinations and emotions are not secreted as is the bile or urine; they *are* the brain in a state of activity. Nerve-cells do not act by secreting thoughts; they merely serve as conducting mediums to harmonize the effector mechanism of the body with its environment. This conductivity may be raised or lowered both physiologically and by disease, but it nevertheless still remains only conduction. The only possibility in the way of disorder is therefore one of conduction and the same laws must hold in regard to nervous integrations in disease as in health. It may be true that certain paths have been destroyed by disease or rendered incapable of function in some other way. But the spread of nerve energy along the paths still intact and open will follow exactly the same laws of biologic importance and frequency as those which obtain in health.

Hence adherence to the methods of teaching which regard the various manifestations of disordered mind as independent "symptoms" cannot fail to create erroneous impressions and do more harm than good. It is absolutely essential that the insanities be studied as disorders of adjustment as well as in their relation to internal medicine, if any grasp is to be obtained of what the individual cases mean. In other words, they must be studied as psychologic, as well as pathologic, problems.

The value of such a biologic conception of cerebral or mental activities is not limited to the study of its specific disorders known under the name of insanity, but has a much broader application for the physician in his dealings with patients no matter what their ailment may be. It has too long been forgotten, in the practice of medicine, that we are treating not diseases but human beings, and that a knowledge of this individual's modes of psychologic adjustment may well have greater value in determining the actual procedure to be adopted than the broadest knowledge of materia medica. The importance of the patient's attitude toward himself, his environment and his health or disease is frequently greater, as regards etiology, therapeusis and outcome, than all other factors concerned, and yet it is the one which we most neglect. Mental disorders represent Nature's experiments, from which more can be learned concerning the biologic laws of conscious adaptation than from any other source.

The value of the study of psychiatry for the medical student is hence not limited, as Dr. Dercum suggests, to acquiring the ability to recognize mental disorders early and to handle them reasonably, but extends to the whole realm of the practice of medicine by the insight which it gives into the highest known means of adjustment. The study of these mechanisms is the psychology apparently banned by Drs. Burr and Dercum.

I wish to insist, therefore, that the broad principles of the newer biologic psychology are essential to and part of the study of even elementary psychiatry. Without them the teaching of mental disorders must remain a hopelessly unintelligible, dry-as-dust concatenation of uncoordinated observations.

Diagnosis Based on Probabilities.—Never indulge in that form of reasoning which is supposed to be based on probabilities. "An ulcerated lump of the tongue, the patient is a woman, therefore it is not likely to be carcinoma." Remove it and see what it is.—C. B. Lockwood, in *Clin. Jour.*

THE STAPHYLOCOCCUS-SPRAY TREATMENT OF DIPHTHERIA CARRIERS

A. M. ALDEN, A.M.
Assistant Director of the Bacteriologic Laboratory of the Iowa State Board of Health
IOWA CITY, IOWA

The presence of diphtheria bacilli in the throats and nasal passages of patients convalescing from the disease long after all clinical symptoms have disappeared constitutes one of the most prolific sources of infection the health officer has to deal with in combating this disease. Just what the average period of persistence in virulent cases of diphtheria is it is hard to say. Graham Smith and Cobbett's[1] tables give it as 31.6 days and estimate that one-third of the cases exceed this time. Our experience, however, has been that according to the cultural method the average period of persistence in Iowa is about sixteen days. Henry Albert[2] says:

> Unfortunately, however, there are some in whom the bacteria remain so persistently that they can still be found for from five to seven weeks, in one of our cases for seven weeks and in one case on record for twenty-three weeks after clinical recovery from the disease. Another condition which has been the subject of considerable study in recent years has been the presence of diphtheria bacilli in the throats of persons who are not, nor, so far as known, have ever been affected by diphtheria. These diphtheria bacilli carriers are of most frequent occurrence when diphtheria is prevalent in a community. Fortunately the bacilli living under such conditions are frequently of low virulence and in some instances have lost their disease-producing power entirely. On the other hand, their virulence is often of full strength and even though they may not produce any disease in the carrier, when transferred to other persons, they may produce the disease in its most virulent form. It is very certain that diphtheria has been kept alive for months in institutions and communities by such carriers. Indeed it is quite probable that carriers with either a normal throat or a slightly "sore" throat are the source of more cases of diphtheria than persons affected by well-marked cases of the disease.

A ruling of the State Board of Health in Iowa provides that before a diphtheria patient can be released from quarantine, two consecutive negative reports must be obtained from the State Laboratory on cultures taken from both nose and throat. During the last twelve months we have had a number of cases the cultures from which remained consistently positive after the normal period of persistence and after all manner of local treatment had been used. Following the reports of Schiötz,[3] Page,[4] Catlin, Scott and Day,[5] Lorenz and Ravenel[6] and others[7] who had successfully used the staphylococcus spray in such cases, we decided to use it in all cases from which the cultures remained positive after four weeks.

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[1] Nuttall, G. H. F., and Smith, G. S. Graham: The Bacteriology of Diphtheria, 1908, p. 421.

[2] Albert, Henry: Diphtheria Carriers, Am. Jour. Pub. Health, ii, No. 10.

[3] Schiötz, A.: *Uskadeliggereke af Infektionsbaere ved Difteri*, Ugesk. f. Læger, Dec. 16, 1909; abstr., THE JOURNAL A. M. A., Jan. 29, 1910, p. 422.

[4] Page, Henry: Diphtheria Bacillus-Carriers, Arch. Int. Med., January, 1911, p. 16.

[5] Catlin, S. R., Scott, L. O., and Day, D. W.: Successful Use of the Staphylococcus Spray on Diphtheria Carriers, THE JOURNAL A. M. A., Oct. 28, 1911, p. 1452.

[6] Lorenz, W. F., and Ravenel, M. P.: The Treatment of Diphtheria Carriers by Overriding with Staphylococcus Aureus, THE JOURNAL A. M. A., Aug. 31, 1912, p. 690.

[7] Slack, F. H., Arms, B. L., Wade, E. M., and Blanchard, W. S.: Diphtheria Bacillus-Carriers in the Public Schools, THE JOURNAL A. M. A., March 19, 1910, p. 951. Kretschmer, M.: Zur Bekämpfung der Bazillenpersistenz bei Diphtherierekonvaleszenten. Med. Klin., 1911, vii, No. 3. Lydia, Dewitt: Jour. Infect. Dis., January, 1912.

The culture used was a composite one made by mixing equal portions of three different strains of *Staphylococcus pyogenes aureus*, isolated from throat-cultures. These were grown on agar and afterward transferred to broth. The material sent out was 30 c.c. of an eighteen-hour broth culture grown at 37.5 C. (99.5 F.). This was sent in a cylindrical bottle, the top of which was closed with a rubber cap and sealed with paraffin. Several sterile rubber caps were sent with each bottle.

The following set of instructions was also enclosed with each bottle of the culture sent out:

DIRECTIONS FOR USE OF STAPHYLOCOCCUS CULTURE:

The enclosed bottle contains a broth-culture of *Staphylococcus pyogenes aureus* and should be used in the following manner:

Remove paraffin and rubber cap and pour a portion of the culture (enough for one treatment) into an atomizer, the bottle and application tubes of which have been sterilized by boiling for ten minutes. Spray the throat and nasal passages well.

Note.—1. One of the enclosed rubber caps should be replaced on the bottle immediately after using so as to prevent contamination. 2. The culture should be kept in a cool, dark place. 3. Care should be taken not to get any of the culture on skin of the patient, and if this happens the area should be thoroughly cleansed with alcohol. 4. Treatments should be given at least once a day. 5. The first culture should be made twenty-four hours after the first and before the second treatment. Subsequent cultures should be made at intervals of twenty-four hours until two consecutive negative reports are obtained from the laboratory.

In order to secure some statistics as to the real value of the treatment we also enclosed a blank data card which we asked the doctor to fill out and mail back to the laboratory after the patient was released from quarantine.

The accompanying table gives a summary of the results obtained in the first sixteen cases:

SUMMARY OF RESULTS IN SIXTEEN CASES IN WHICH STAPHYLOCOCCUS SPRAY WAS USED TO FREE PATIENTS OF DIPHTHERIA BACILLUS

Case No.	Ill and a Carrier, Days	Antitoxin Received, Units	Other Methods Used	No. of Treatments	Days Required for 1st Neg. Culture	Complications Due to Staphylococcus
1	29	15.000	Antiseptic spray	4	3	Slight edema of face
2	22	1.000	Alkaline antiseptic	5	3	Chronic nasal catarrh temporarily worse
3	58	17.500	Gargle	5	2	None
4	33	10.000	Mercuric chlorid spray	2	2	None
5	33	1,000	Pot. chlorate, hydrogen peroxid	4	4	None
6	36	3.000	Antiseptic gargle	2	2	Sore throat; slight fever.
7	35	8.000	Antiseptic gargle	2	2	Sore throat; malaise.
8	28	10.000	Hydrogen peroxid, glycerin and tannic acid	3	2	Slight redness of throat.
9	28	5,600	Pot. permanganate spray	4	5	Pharyngitis
10	44	5,000	Silver nitrate swab	4	4	None
11	*	None	Silver nitrate, 10 per cent.	9	7	Slight fever; nasal catarrh increased
12	40	5,000	10 per cent. ferric chlorid	12	8	None
13	21	5,000	Alkaline gargle	3	1	None
14	33	15.000	3 per cent. phenol spray	4	2	None
15	28	5.000	Hydrogen peroxid	5	3	Headache
16	29	20.000	Silver nitrate, 10 per cent.	13	†	Goiter somewhat increased in [illegible]

* Never had the disease but was a carrier and gave positive cultures from August 25 to September 13.

† Released by virulence test.

In these cases all but three patients had carried the organism of diphtheria constantly for at least a month, and in one case the time of persistence was eight weeks. During this time, notwithstanding the fact that all manner of local antiseptic and astringent treatment was used, the patients continued to give positive cultures. This can be accounted for by the fact that in cases of this kind the organisms are usually in the deep tonsillar crypts which often become plugged, thus preventing the local application from reaching the organism. The antiseptic condition produced remains for only a few minutes because the excess of the agent used is carried out by the secretions. With the staphylococcus spray the effect seems to be different; whether or not this is due to some antagonistic action of the products produced by the organisms themselves it is impossible to say at this time.

In all but one of these cases the patient gave a negative culture within a week after the use of the staphylococcus spray was begun, and in the majority of the cases only a few applications were needed to free the throat from *Bacillus diphtheriae*. In one case this remedy failed absolutely and the patient was released by a negative virulence test. Possibly this failure was due to the culture having become inactive or to defective application. The fact remains that in all but one of the cases it was effective.

When this remedy was first introduced there seemed to be a general reluctance on the part of physicians to use it on account of the danger of introducing the live organisms into the throat and the consequent possibilities of such serious complications as otitis media, mastoiditis, etc. This fear seems unwarranted in view of the fact that it has now been tried in upward of forty reported cases and no serious results have been reported in a single patient.

Below I am giving the history of two typical cases showing the course of the disease and the effects of this treatment.

REPORT OF CASES

Case 1.—A farmer, aged 21, came to office November 2, complaining that his throat had been very sore for a week. Examination showed membrane covering entire back of throat. The cervical lymph-nodes were enlarged and tender. The only constitutional symptoms were headache and slight malaise.

November 2: Culture showed large numbers of *B. diphtheriae*.

November 5: Five thousand units of antitoxin given.

November 6: Five thousand units of antitoxin given.

November 22: Culture positive; all symptoms had disappeared.

November 23, 26, 27 and 29: Culture positive.

November 30: Culture negative.

December 4: Culture positive.

December 7: Culture positive; staphylococcus spray used.

December 8: Culture negative; staphylococcus spray used.

December 9: Culture negative; staphylococcus spray used.

No constitutional symptoms followed the use of the staphylococcus spray. The throat was red and slightly swollen for one day.

Local applications of hydrogen peroxid, and glycerin and tannic acid were used in throat and nose during the duration of the disease and of the carrier condition.

Case 2.—A boy, aged 13, developed a typical case of diphtheria, July 21, which ran as follows:

July 21: Culture positive.

July 24: Five thousand units of antitoxin given.

July 25: Seven thousand five hundred units of antitoxin given.

July 31: Membrane disappeared and patient was apparently well.

August 7, 10, 17 and 23: Culture positive.

August 25: Five thousand units of antitoxin given.

August 29: Culture positive.
September 3: Culture negative.
September 6: Culture positive.
September 10, 11 and 12: Staphylococcus spray used.
September 13 and 14: Culture negative.

There were no constitutional or local symptoms traceable to use of the spray.

It will be seen that each of these patients developed a typical carrier condition. In each case the membrane disappeared and all clinical signs and symptoms of the disease were stopped shortly after the antitoxin was given; notwithstanding the fact, however, that the patients seemed perfectly well, their throats continued to give positive cultures for several weeks. In each case there is one negative report on a culture after which the reports were again positive. This may be due to the local antiseptic treatment having been used shortly before the culture was taken, or to carelessness on the part of the physician in taking the culture. In neither case did it require more than three treatments with staphylococcus culture before a negative culture was obtained.

CONCLUSIONS

In view of all these facts I think that the following conclusions are warranted:

1. No patient having had diphtheria should be released from quarantine until at least two consecutive negative cultures are obtained from both nose and throat, and ear if symptoms are present.
2. Antitoxin will not free the patient from the carrier condition but some local application is necessary to rid the throat and nasal passages of *B. diphtheriae.*
3. In fifteen out of sixteen cases the staphylococcus spray effectively cleared the throat of *B. diphtheriae* after other methods had failed.
4. Apparently no harm resulted to the patient from the use of the spray.

A REPORT OF A CASE OF THROMBOSIS OF THE INFERIOR VENA CAVA

THOMAS WILLETT, M.D.
AND
E. W. MAECHTLE, M.D.
WEST ALLIS, WIS.

The report of the following single case seems warranted on account of the infrequency of ante-mortem diagnosis, and because of the favorable outcome through the establishment of collateral circulation. We claim no credit whatever for the recovery course, and very little for the diagnosis, which we realize was the result of unusually favorable circumstances:

Patient.—A woman, American-born, aged 30, weighing about 125 pounds, and presenting a somewhat under-nourished and anemic appearance. Family history good.

History.—No infectious or chronic diseases are reported, and no vaginal discharge, swelling of legs, or ascites up to the last pregnancy. Menses began at 14 and are of the regular twenty-eight-day type. Patient has four living children, the youngest born Dec. 20, 1912, and has had two miscarriages; one a pregnancy of a month's duration, between the second and third child, the other of three months' duration, between the third and the last. During the sixth month of her recent pregnancy, a marked albuminuria developed with some hyaline casts, granular casts, and white blood-cells, which findings were accompanied by slight swellings of the feet. This condition cleared up under rest, diet, diuretics, hot packs and catharsis. We examined the urine at biweekly intervals until December 1, or the middle of the last month, when it again showed albuminuria, hyaline casts, granular casts, and white blood-cells. The patient complained of headache at this time, and the feet were slightly swollen. These symptoms, however, again vanished, with treatment as before. On our arrival to attend labor, December 20, the patient was found in a slight general convulsion. Examination showed two fingers' cervical dilatation. A podalic version was done, and a living but nearly comatose child was extracted. After free bleeding, normal salt solution was given per rectum, together with some stimulation. No more convulsions were noticed, and the patient went through, to all appearances, a normal postpartum course, except that she remained very weak, and continued to exhibit a toxic uremic appearance. About three weeks following childbirth, the patient complained of pains in the lower extremities, most severe in the right. She was put back to bed, feet elevated, and hot packs applied to the inner aspect of the right thigh and groin, where the pain was most severe.

Examinations.—The urine presented only a trace of albumin, no casts, and only occasional white cells. In the right lumbar region the kidney could easily be palpated, being slightly swollen and quite tender. Two weeks later, Jan. 31, 1913, she was removed to a Milwaukee hospital for more careful study. Blood examination showed a hemoglobin percentage of between 50 and 60; 8,000 leukocytes and 3,500,000 erythrocytes. The urine diminished in quantity until on the third day only 4 ounces were obtained by catheter in twenty-four hours. Urinalysis showed albumin, casts and a large number of white cells. A blanched uremic appearance with an expression of anxiety, were present with extreme tenderness and pseudorigidity on the right side of the abdomen. This diminished under morphin, and a regular, smooth mass, in the right iliolumbar region, became palpable. The temperature had varied from 99 to 102.6 F., with pulse from 90 to 120 during these three days. A tentative diagnosis of right perirenal abscess was made, and in consultation with Dr. Maurice Henderson of Milwaukee exploratory operation was decided on.

Operation.—Feb. 3, 1913, under light ether anesthesia, incision was made in the right lumbar region. Considerable serous fluid escaped from the right perirenal space, and the right kidney was found displaced downward and anteriorly, but freely movable. It was slightly enlarged, and very red and hyperemic. Behind the kidney an elongate, tubular, regular, hard structure was seen, and on examination was found to be the inferior vena cava, completely thrombosed from its bifurcation into the iliac veins to its passage through the diaphragm. Drainage was put into the perirenal space, the wound closed, and the patient returned to the bed in a fair condition.

Postoperative History.—Considerable serous fluid drained from the wound for several days, but this gradually diminished and the wound was allowed to close. On the second day urine was voided which showed approximately the same amount of albumin, casts and blood-cells as before the operation. The temperature varied for the next two weeks from 98 to 102 F., but gradually the periodic rises diminished until normal was maintained. Tenderness over the kidney and the right umbilical region gradually decreased as discharge lessened and the kidney returned to more nearly its normal position. During examination of the patient on the third day following the operation, marked enlargement of the superficial veins of the thigh, superficial circumflex iliac veins and superficial epigastric vein of the right lower quadrant was observed. These became more and more prominent and were followed by a similar condition on the left, though not as extensive. For several weeks following her discharge from the hospital the patient complained of tenderness over these veins and discomfort when attempting to stand erect or extend the legs.

Her general condition during this time was good, appetite fair, urine normal in amount and free from albumin, casts or blood-cells. Blood-counts at intervals show from 80 to 90 per cent. of hemoglobin, 4 to 5 million red corpuscles, and 6,000 to 7,000 leukocytes per c.mm.

April 15, 1913: Patient is up and about, doing her own housework, and apparently her compensation is very efficient, for with the exception of an occasional swelling of the feet after being on them for a long time, she experiences no discomfort.

625 Seventy-Second Avenue.

PERSISTENT HICCUPS

A. J. CAFFREY, M.D.

MILWAUKEE, WIS.

I feel that I should report the following case for a twofold reason: first, because of the immediate response to the drug of the troublesome hiccups which had been persistent for eight days, and were fast sapping the patient's strength and vitality; and secondly, on account of the clearing up of an old chronic bilateral exuding eczema on the flexor surface of the arms.

History.—The patient, J. R., bachelor, 48 years old, was a large, healthy-looking fellow with ruddy complexion, probably due to his occupation; he was foreman of the signal service of a large railroad, and his work kept him out of doors in all kinds of weather. While not a teetotaler, he was abstemious. Mother died following an operation for gallstones; father died of old age; one brother and one sister were living and healthy, except that the brother was troubled with eczema on one hand.

Present Trouble.—Patient called me Feb. 28, 1913, for hiccups, which had persisted for four days before I saw him. He was fast breaking down and losing his healthy appearance.

Examination.—Pulse was 58, temperature normal, systolic pressure 140 mm., diastolic 90 mm., leaving a fairly high pulse-pressure of 50 mm. He could give no reason for his condition unless, as he said, it was due to a drink of cold beer which he had taken forty-eight hours before the hiccups started. This seemed to me a rather long "incubation" unless there is some special toxin or irritant in our "famous beer" which takes two days to show its effect. He complained of soreness in the epigastrium and intercostal muscles, which was probably due to the continual spasms of the diaphragm. There was slight tenderness at McBurney's point, but the abdominal muscles were lax and there was no indication of appendicitis. He had been troubled for many years with chronic exuding eczema of the arms.

Treatment and Results.—A soap-suds enema was given and stomach lavage was tried, with no relief. I gave large doses of bicarbonate of soda and bismuth, but without any appreciable result. I tried flexure of the thighs on the abdomen, with pressure against the diaphragm, according to the method of Jödicke.[1] I also tried F. Kanngiesser's[2] method, giving 5 gm. of citric acid in one glass and the same amount of sodium bicarbonate in another to promote effervescence in the stomach and get pressure on the diaphragm. I also tried rhythmic traction on the tongue, without avail. I then took Osler's advice and resorted to morphin, without letting the patient know what he was getting. He obtained rest only under the influence of morphin: when he awoke his hiccups would return. Four days after I was first called, eight days after the trouble began, after resorting to several other things, I finally consulted Dr. L. F. Jermain, who suggested atropin. I wondered why I had not thought of this drug before, as it was clearly indicated in this case, which was, without doubt, a case of what Eppinger and Hess called "vagotony": in other words, the hiccups were due to some abnormal excitability of the inhibitory fibers of the vagus nerve, a fact which could have been gleaned from the bradycardia. *After one injection of 1/50 grain of atropin, the patient's hiccups stopped and never returned.* I continued giving 1/50 grain atropin once a day for eight days. Pulse increased to 70, appetite returned and *the persistent chronic weeping eczema healed and dried up, leaving the patient's arms in a generally healthy state.*

I have searched the medical literature thoroughly and find no other instance in which atropin has had such an effect on chronic exuding eczema. It is not my intention to recommend it as a routine treatment for this condition, but merely to report what occurred coincidently in the treatment of hiccups. After it was suggested no treatment was given other than the injection of atropin.

600 Grand Avenue.

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[1] Jödicke, P.: Med. Klin., Berlin, May 28, 1911.

[2] Kanngiesser, F.: Persistent Hiccough, Med. Klin., Berlin, March 26, 1911.

ONE GAUZE SPONGE REMOVED FROM BLADDER, ANOTHER FROM THE VAGINA, MONTHS AFTER A DUEHRSSEN OPERATION FOR PROLAPSE

Henry Dawson Furniss, M.D., New York

Stoeckel[1] reports the removal from the bladder of a gauze sponge that had wandered there after a Dührssen operation. He had another case of sponge in the bladder following an abdominal operation. He states that Kermauner is the only one who has made a diagnosis before operation of gauze sponge in the bladder. In my case, the history of which follows, the diagnosis was made before operation.

Patient.—A woman 43 years old had a Dührssen interposition operation for prolapse in the summer of 1911. Immediately after the operation there was much wound discharge of a seropurulent nature, and the patient ran a temperature of 100 to 101 F. for eight or ten days. Shortly after leaving the hospital she began to have bladder discomfort, which gradually increased. At the end of five months, when this discomfort was extreme, I performed a cystoscopy and found that the portion of the bladder in the region of the right ureter showed *bullous edema*, which obscured the ureteral orifice, over an area the size of a half dollar, and later I again did cystoscopy and was surprised to see a small portion of gauze sticking from the middle of the edematous area. The patient was advised to come to the hospital. She went home and the next day had a sensation as if something had given away, and afterwards was unable to pass her urine. The suffering from the retention was intense and catheterization was necessary. The next day, under ether anesthesia, with the patient in the knee-chest posture, through a No. 12 Kelly speculum, I removed a small probang sponge with no difficulty at all. Following this the cystitis rapidly cleared.

Three months later the patient again called and said that for two weeks she had had a profuse watery vaginal discharge. With the patient in the knee-breast posture and the perineum retracted with a Sims speculum, a small bit of gauze was seen protruding from a small opening in the anterior vaginal wall. By constant traction another small probang sponge was removed. After this the patient recovered completely and the result of the Dührssen operation was entirely satisfactory.

The noteworthy features of this case are the complete closure of the wound in the presence of a foreign body, the appearance of one sponge in the bladder many months after the operation, and the other in the vagina months subsequent to this.

393 West End Avenue.

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[1] Stoeckel: Ztschr. f. gynäk. Urol., January, 1913, No. 1.

Municipal Health Work.—No city can know its own health conditions—no city can determine offhand whether its preventable diseases are excessive or not—unless there are available the data of other cities of like size and similarly situated. The average citizen becomes so accustomed to the prevalence of disease about him that he regards the condition in his home town as "normal" and "inevitable."—Birth and Death Bookkeeping, bulletin used by Association of Life-Insurance Presidents.

Special Article

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS[*]

(Continued from page 1792)

VIII

COMMERCIAL MIXED VACCINES

It has been repeatedly asserted that vaccine therapy with marketed stock vaccines is far from satisfactory in actual practice, notwithstanding the widely advertised claims to the contrary. The mixed vaccines of commerce furnish evidence of the correctness of this assertion. Had vaccines of single bacterial species been successful, no firm in the vaccine business would have had occasion to offer the many and ridiculous combinations now on the market. A physician who embarks in vaccine therapy with commercial vaccines soon encounters the inevitable obstacles to success. By the vaccine maker he is led to ascribe these shortcomings to a variety of causes, none incriminating the method of second-hand treatment by the agency of these products. A faulty bacteriologic diagnosis, a mistake in dosage, a mixed infection, these or similar reasons are advanced to account for the lack of success. The theory of mixed infections leads to the idea of injecting several species of vaccines in one operation. To facilitate their use the manufacturer hits on the expedient of combining or mixing them. Once started, and with the impetus of ever-increasing competition, no end to the possible varieties of vaccine mixtures is in sight, unless this end is ordained by the physician himself. That the situation resolves itself into an imposition on the profession is the opinion of those whose practical familiarity with the subject best qualifies them to judge. A burden is being forced on the profession which will speedily assume the proportions attained by proprietary drug combinations. The menace can not be counteracted unless physicians will accept the guidance of unselfish, non-commercial interests and refuse to purchase and use mixed commercial vaccines.

THE MIXED STOCK VACCINE A MAKESHIFT

The mixed stock vaccine of commerce is a makeshift. It is offered as a substitute for correct diagnosis. Like all such makeshifts in science it is doomed to failure. A canvass of the situation which shows that the medical profession is deluged with mixed vaccines of ever-increasing complexity, justifies this assertion. Since no limit to the absurdity is set by the manufacturer, one must be instituted by the profession itself. Such a limit would abolish all the ready-mixed vaccines on the ground of their having no rational indications for use, and because of their failure as therapeutic agents.

MIXTURES TO BE MADE BY THE PHYSICIAN

Ready-mixed stock vaccines, even of the simplest possible composition, have nothing to recommend them. For those physicians who cannot prepare their own vaccines, or whose association with competent bacteriologists is not close enough to have autogenous vaccines prepared for them, the marketed stock vaccines of individual bacterial species should be available, to be mixed as occasion requires Instead of trusting to combinations so outlandish as most of the commercial mixed vaccines, a careful practitioner who ventures far enough into vaccine therapy to undertake the treatment of mixed infections should make his own mixtures. Such mixtures should preferably have as their indication the findings of a bacteriologic analysis, either by culture-test or by study of smear preparations. It is rare indeed that more than two bacterial species play a simultaneous pathogenic rôle in a mixed infection; hence the folly of injecting multiplex vaccines where the superfluous bacterial species are certainly wasted, and where they may nullify the effects of those properly indicated, or even work harm in other ways. In fact, there is still a well-founded doubt as to how far the germ of a secondary or a mixed infection is to be held accountable for the morbid process. Many authorities believe that in these complicated infections there is but one original and primary causative microbe whose conquest by natural or artificial agencies suffices. Diphtheria, for instance, is always a mixed infection if one may judge from the bacteriologic flora from a diphtheritic throat. Still the prompt neutralization of diphtheric toxin by antidiphtheric serum usually disposes of all infection. Should the antitoxin fail in this, no vaccine or combination of vaccines, even if directly derived from the afflicted individual, improves the situation.

INCOMPATIBILITIES OF MIXED STOCK VACCINES

In the matter of chemical and therapeutic incompatibility there is still much to learn concerning our best-known drugs. Then consider bacterial vaccines—therapeutic novelties—which the most advanced bacteriologists hesitated to use ten years ago. What do we know about the chemical or physical interactions or incompatibilities of mixtures such as are to-day forced on the medical profession? When it comes to the problems of biologic or physiologic incompatibility of mixed bacterial vaccines, our ignorance is complete. Ignorance so complete should beget a fitting meekness, rather than blind folly such as attends the use of multiplex vaccines and allied products.

Experiments often repeated and clinical trials rigorously controlled form the only rational modern basis for recognizing therapeutic agents in medical practice. Why should these trials of biologic novelties be made by the private practitioner to satisfy the shortcomings of commercial firms? The welfare of his patients and his own reputation are at stake; the situation is too serious to be dominated by purely mercenary considerations.

IDEAL VACCINE THERAPY

Under ideal conditions vaccine therapy would be prosecuted only by those physicians whose training in the several special fields of bacteriology, immunology and practical medicine had thoroughly qualified them to pursue the treatment with scientific discrimination and caution. The problem of a commercialized field would then be solved, for commercial vaccines would not flourish for want of a market, and commercial laboratories purporting to supply effective autogenous vaccines would languish for lack of patronage. But under present conditions such a desirable state is unattainable. In reality the medical profession has allowed itself to be exploited by mercantile interests to a point at which promiscuous vaccine therapy with all its faults is widely practiced. The pressing problem therefore becomes one of so directing the practice as to secure the utmost advantage to the profession and the public. To this end the following recapitulatory recommendations are offered:

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[*] This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

Commercial Vaccines of Single Species Alone Desirable.—As material for his experiments in vaccine therapy the practitioner who relies on the market products should supply himself with vaccines of individual bacterial species. The physician should learn to discriminate cases in which stock vaccines can be successfully used, and procure a stock representing this selection.

Simple Stock Container Recommended.—For keeping his stock vaccines, the physician should insist on being supplied with a simple, inexpensive bulk container covered by a rubber cap or similar device to permit the ready withdrawal of portions of the vaccine without contamination of the remainder. A vaccine bottle fashioned on the model of Wright's original one, as previously described, answers the purpose admirably. This container should hold a suspension of killed bacteria sufficient to furnish at least twenty-five doses of average size. The package should contain not less than 10 c.c. of bacterial suspension, so concentrated as to yield the average dose for a given species in 0.25 c.c. A larger package of 25 c.c. would be convenient when the vaccines are employed more frequently. To illustrate the foregoing suppose the vaccine to be of staphylococcus, suspended in 10 c.c. of fluid, and of such a concentration that 1 c.c. contains 1 billion killed cocci. An average dose, or 250 million, would be present in 0.25 c.c. of the stock vaccine. With a properly graduated syringe the required amount of vaccine could be withdrawn, and if a very small dose, say 10 million, were required, boiled water or sterile saline solution could be drawn into the syringe after the vaccine to bring the fluid to a volume (0.5 c.c. to 1 c.c.) convenient for injection. A bulk package of this description would furnish enough vaccine to treat a single patient over a considerable period or to treat several patients, and, what is still more important, would allow the physician to exercise voluntarily that latitude in dosage so fundamental to success.

Cost of Bulk Package.—A bulk package or vaccine bottle as above described containing a suspension of any single bacterial species in amount sufficient to yield twenty-five or more average doses could be profitably furnished at a price not to exceed that now set on a single dose of commercial vaccine contained in a single bulb, bottle, ampule or syringe. Certainly there is no reason why the bulk stock vaccines here referred to could not be marketed at a price considerably less than that at which a package of vaccine virus (small-pox) of ten points or capillary tubes is offered. For economy and convenience the advantages of the outfit are such as to warrant its general adoption.

To Prepare Mixed Vaccines.—A supply of bulk containers representing the usual bacterial species not only arms the physician to undertake the treatment of simple infections, but also supplies him with the material by which he can prepare his own mixed vaccines. It is only necessary to combine the vaccines of such single species as are indicated, in such doses as experience has shown to be adequate. All of this is readily accomplished by withdrawing into a syringe from the several bulk containers the requisite quantity of bacterial suspension to meet the requirements. Presumably the indications for a mixture of this kind have been furnished by a bacteriologic analysis, preferably a culture test, or less desirably by microscopic examination of stained smear preparations. But even though this expedient at once assures an independence of the drawbacks of commercial ready mixed vaccines, it does not diminish the weight of a number of objections raised on good scientific grounds relative to the use of any sort of mixed stock vaccines.

NOTE.—In these articles the subject of phylacogens has not been considered, because, being neither serums nor vaccines, but in large measure toxic products of the metabolism of bacteria, they do not come within the scope of the present series. They have not been scientifically investigated; they are not standardized, nor are they standardizable; most serious and even fatal results have followed their use.

(To be continued)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

SOLUTION AMYLENE-CHLORAL (50%) Kalle.—*Solution of amylene-chloral (50%) Kalle is a 50% solution by weight of methylbutanol-chloral,* $CCl_3.CH(OH)OC(C_2H_5)(CH_3)_2$, produced by union of chloral, $CCl_3.CHO$, and 2-methylbutan-2-ol (amylene hydrate) $CH_3.CH_2.C(CH_3)(OH).CH_3$.

Absolute amylene-chloral (methylbutanol-chloral) is a colorless, oily liquid of characteristic, camphoraceous odor and cooling, burning taste. Soluble in alcohol, ether, acetone, and fixed oils in all proportions It is insoluble in water, but on long contact with it goes into solution. On the further addition of water, separation occurs. Specific gravity, 1.24. Boiling-point —23 C. (—9.4 F.) with decomposition.

Actions and Uses.—Much like those of hydrated chloral, but with less power to abolish the reflexes and less irritant. It is used as a hypnotic and in mania.

Dosage.—The dose of solution amylene-chloral (50%) Kalle in insomnia is 0.5-1 Cc. (8-15 minims), in mania 1.5-3 Cc. (20-45 minims). Solution amylene-chloral (50%) Kalle is not adapted for hypodermic use as it is apt to give rise to irritation at the point of injection.

Manufactured by Kalle and Co., Aktiengesellschaft, Biebrich a. Rh., Germany (Merck and Co., New York). U. S. patent No. 635,471 (Oct. 24, 1899, expires 1916). No U. S. trademark.

Solution of the Problem of Fee-Division.—The whole question of fee-division, according to the *Journal of the Indiana State Medical Association* "resolves itself into one of just and adequate compensation for the general physician, and he is his own worst enemy in all efforts to better his condition. Either he does or he does not earn the fees he gets out of his surgical cases. If he earns them then let him charge and collect from the patient. If he does not earn them then he is not entitled to them as a gift from the surgeon, who ought to earn all that he charges. . . . The solution of the fee-dividing proposition, if the medical profession is to solve it, largely resides with the general physician. He must stop trying to get something without giving an adequate return. . . . He must try to raise his own level instead of trying to pull others down to his present level. He must, in company with every physician in general practice or a specialty, build up instead of tearing down, and, last but not least, he must be fair to patient and himself, and morally and ethically true to his profession. He cannot be this and indulge in fee-taking from the surgeon."

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SATURDAY, JUNE 14, 1913

PURE FOOD WELL COOKED

There is some truth in the assertion that neither states' rights nor slavery, but the frying-pan, brought on the Civil War; for frying encapsulated the food in a layer of fat impervious to the digestive juices, and the resulting indigestion aroused the mutual enmities and the berserker rage of our fathers. America is preeminently the land of the deadly hot bread, the sinker, the flapjack, the Bingo frankforter, the quick lunch, dyspepsia, with its consequent neurasthenia, and the stomach bitters, which often approximate whisky in alcohol content. It would not be difficult to prove that "bad cooking has driven many a man to drink." Not only are our meats often badly cooked, but also vegetables are frequently boiled in a way which deprives them of their characteristic odor and their toothsomeness. "Villainous and idiotic" are the only adjectives that can describe our methods of cooking vegetables, in the opinion of Henry T. Finck,[1] in his gastronomic guide to health and good living. We make other dietetic errors when we sugar our salads and salt our fruits. There would seem to be among our people, in larger measure than elsewhere in civilization, a contempt for the culinary art, as if it were beneath notice, or decadent, or savoring of the effete old world. Yet what in life can be more essential than the right preparation of substances which are to keep the human machinery going, in order that the best may be got out of it, with fewest slowings down or interruptions?

In the Old World the relation of zest and fragrance to food is held vital, and justly so. Great Europeans. indeed, have seriously interested themselves in such matters. It is a dictum on the Continent that the *saucier* is born, not made. On numerous occasions the elder Dumas invited friends to dinner, personally prepared the most succulent dishes, and then, exchanging his cook's attire for his dress clothes, regaled his cronies with the products of his "noble art." Montaigne wrote a notable book on the science of cooking. Frederick the Great praised his cook in verse—the former being much better than the latter. Lord Bacon thought it no shame to bend his mighty intellect to the problems of the kitchen. The composer Rossini composed salads as symphonic in their way as his operas, and regretted that by reason of his neglected early education he could not have made cooking, rather than music, his profession. In Brillat-Savarin's great work, "The Physiology of Taste," are axioms as profound—at least as entertaining—as ever Plato or Epictetus set down. For example:

"The education of the tastes and the appetite should be an index of the degree of civilization."

"Digestion, of all bodily functions, has most influence on the morals of the individual."

"A good dinner is but little dearer than a bad one."

"The most momentous decisions of personal and of material life are made at table."

"The fate of nations depends on how they are fed."

"The man of sense and culture alone understands eating."

"The discovery of a new dish does more for the happiness of the human race than the discovery of a planet."

Louis XVIII invented a famous dish—which is perhaps the best thing he ever did for his people. The Prince of Condé won international fame as the inventor of an improved bean soup. Richelieu, Colbert and Mazarin were celebrated for like achievements.

It does not follow that, in emulation, our chief magistrate should add to his already illustrious services by donning an apron and inventing an entirely original *sauce princetonnaise;* or that our genial Secretary of State should aid our visitors from foreign courts to forget the episode of the unfermented grape-juice, by evolving for their delectation a *consommé à la Commoner.* But our fellow citizens and their better ninetenths, and our doctors, and most emphatically our nurses, ought to make pure food well cooked a matter of serious national import. The only animal which cooks its food is man, and this is a badge of distinction from the brute. We cook food for at least four reasons: to sterilize it, to make it nutritious, to render it more easily digestible, and to improve or vary its flavor. The last of these is at least as important as any of the others. When the gustatory nerves tingle in response to the stimulus of some rare condiment or aroma, the saliva flows in joyous excitement, and the digestive juices, by whose benign influences food is transformed into nourishment, respond in salutary and fullest measure. The simple and pleasant way to bring this about is to pay proper attention to the flavor of food.

RADIUM IN THE UNITED STATES

The applications of radium in the domain of medicine and the possibilities of its ultimate efficiency in the treatment of disease are still too little understood to permit of any generalizations or unchallenged statements in respect to radiotherapy. The readiness with which the quack and nostrum faker have adopted the unproved virtues of radio-activity in the prosecution of their lucrative nefarious practices is familiar to those readers who have followed our Propaganda for Reform and have become acquainted with the exploitations of Radol, Radio-Sulpho, and others of that class. Despite this unfortunate misuse of the newer contributions of chemistry which include discoveries that already have revolutionized our ideas regarding the constitution of matter, it must be admitted that radium with its unknown possibilities as well as its marvelous properties has entered into both medical thinking and doing in a way that cannot be overlooked. The alleged potency of the element is only exceeded by its actual price.

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[1] Finck, Henry T.: Food and Flavor, New York, the Century Company, 1913.

Radium institutes have been established in Austria, France, Germany and England; yet few persons are cognizant of the fact that the United States has radium-producing deposits within her borders and has taken the palm from Austria as the radium-producing country of the world. The experts of the Bureau of Mines have lately revealed a situation in respect to this unusually valuable element which leads to the rather surprising conclusion that while all the radium placed on the market in the last few years has been produced in Europe, a large portion of this output has come from American ores.[1] Carnotite and pitchblende are the uranium minerals which carry the radium. Practically the total American output of pitchblende, the richest of these, has come from the mines in Gilpin County, Colorado. Pitchblende of the highest grade was sent out of the country at a time when the world's radium output was supposed to be coming from Austrian ores. Parsons has pointed out that while the Austrian government, realizing the untold possibilities of the radium ores of St. Joachimsthal, has purchased the mines, put their output under direct governmental supervision, and entered into an arrangement whereby this ore is worked up in cooperation with the Vienna Academy of Sciences for experimental purposes in a carefully administered radium institute, America has allowed her much more extensive resources to be exploited on a basis which wastes perhaps irretrievably a large portion of the material mined, and has exported carefully selected ores at a price by no means commensurate with their radium value if worked up at home. At least 20 or 25 tons of high-grade pitchblende have already been sent out of the country.

Of late the foreigners have realized the value of our carnotite resources. This mineral, which always carries vanadium as well as uranium and radium, is purchased almost wholly on its radium content. The more important deposits are scattered over a considerable area in Colorado and Utah. The U. S. Bureau of Mines has discovered that these ores are being shipped abroad in some quantity. An idea of the position of this country in the matter may be gathered from the official data. During the last year, carnotite was produced carrying 28.8 tons of uranium oxid (U_3O_8), from which 8.8 gm. of radium chlorid or 11.43 gm. of radium bromid could be obtained. Practically all of this ore was shipped abroad for the extraction of radium. The value of the radium salts extracted would be $528,000 at the minimum market price. The total supply of radium salts from all other sources including the Austrian mines was probably not more than 3.65 gm. of radium chlorid, basing the production of the Austrian mines for 1912 on that of 1911, which is known. According to the government information it is quite certain that if the ores which have been mined in this country and abroad and sold for radium production have been actually worked up into this material, there is now in existence something like 40 gm. (1¼ ounces) of radium. The price of radium salts varies somewhat. In large quantities it has been $60,000 per gram for both radium chlorid and radium bromid, although the latter contains less metallic radium in proportion to its weight than the former. It should be remembered, therefore, that it is more advantageous to purchase radium chlorid than radium bromid. In small quantities the average price has been $80,000 per gram, which represents about $2,250,000 an ounce.

Bearing in mind that practically every ton of radium-yielding ore mined in 1912 went abroad, that the American deposits are by no means inexhaustible, that we are rapidly depleting our reserve and shipping away material of great value and unknown possibilities which cannot be replaced, that the American medical fraternity has been compelled to procure from abroad such radium as individuals or hospitals could afford, and that the study of the possible application of radium in a therapeutic way has been hampered greatly by its almost prohibitive price, we must welcome an investigation of the situation by American authorities. Scarcely any one has taken up the extraction and refining of radium in this country—the very place where carnotite ores that cannot find a market in Europe are to-day being thrown on the dump and wasted. Perhaps when the days of conservation of our natural resources at length arrive we shall be glad to concentrate and conserve what our foreign friends once rejected when they were exploiting the treasures to which we ourselves were blind.

HEALTH, HYGIENE AND HAUNTED HOUSES

It is by no means a new experience to find the miracles of ancient days and the mysteries of occult arts fading away in the light of modern science. The bloody bread of the Middle Ages, for example, with its sinister forebodings and religious implications, has to-day become a simple demonstration in bacteriology. Unexpected luminous surfaces appearing in the absence of any visible source of light are easily explained by any student of the biology of phosphorescence. Even the almost impenetrable marvels of the active mind as well as those curious manifestations, like hypnotism, which pass under the name of psychic phenomena are yielding to the attempts at a rational interpretation. Weird visions and strange ghosts have at length become the expressions of a disordered mind rather than the visitations of an offended deity. And now the "haunted" house—chronicled in fiction and actually shunned in real life—has been deprived of its mystifying wonders and frightful horrors by the findings of twentieth century hygiene.

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[1] This and other statements quoted are taken from the authorized report of experts of the Bureau of Mines, presented before the American Chemical Society at Milwaukee in March, 1913, by Prof C. L. Parsons. For details see Jour. Ind. and Eng. Chem., 1913, v, 256

Dr. Franz Schneider, Jr.,[1] of the Massachusetts Institute of Technology, has investigated a house in the Back Bay district of Boston which had acquired the annoying reputation of being "haunted." The experiences which led to the investigation were too serious, the symptoms too real, the reports too often repeated and reliable to be overlooked or regarded as mere hallucinations. The slumbers of the inmates in the upper stories were disturbed by strange sensations, such as those of oppression or paralysis; they frequently continued after the sleeper was thoroughly awake and even after the lights had been turned on. The involved children appeared pale and sluggish in the morning, even cold water losing its power to enliven them.

A careful inspection of the building gave the key to the situation. The theory of undetected leaks of illuminating gas as a source of intoxication could not be verified in this case; but it developed that the gases escaping from a "viciously defective" hot-air furnace were sufficient to cause the trouble. The separation between the fire-box and the hot-air ducts (on which the hygienic integrity of the outfit depends) was badly broken, and as a result the inhabitants of the house were bathed in an atmosphere of diluted flue gases. We are confident that this condition might be discovered in many other American homes. Flue gases contain, especially when the combustion is incomplete, considerable amounts of sulphurous oxid and carbon monoxid, both distinctly poisonous gases.

The symptoms in Schneider's cases pointed to the carbon monoxid as the probable chief offender. Sensations of oppression and other mental disturbances are said to be typical of acute carbon monoxid poisoning. Any textbook description of the toxicology of carbon monoxid will bring to mind the possibility of loss of psychic powers, the confused sensations and other features which suffice to explain the sense of oppression that persistently entered into the delusions of the inmates of the "haunted" house. The belief in walking spirits is easily nourished by persons in whose minds real noises would be likely to become exaggerated during the intoxication.

The sensations of apparitions induced by the breathing, during sleep, of a tainted atmosphere are of interest to the students of psychic manifestations. To the medical man Schneider has pointed out some patent hygienic lessons. The hot-air furnace, often praised for its ventilating effect—and with justice when properly operated and in perfect condition—may evidently become a distinct menace to health. May there not be cases of a milder order, which escape detection while still causing slight poisoning? Slight leaks of illuminating gas have often been suggested as a cause of headaches and anemias of obscure origin. Perhaps, as Schneider suggests, we should more often look to leaky furnaces and flue gases for similar effects.

THE CAUSE OF CHRONIC POLYURIA

The theories as to the cause of that form of chronic polyuria which often still bears the rather inappropriate title of diabetes insipidus are far from concordant. The distinction has been made between this disease and primary polydipsia in which the power of the kidneys to secrete a more concentrated urine is not lost, but the low specific gravity is due to the result of the inordinate thirst of the patient rather than any inherent defect of the kidney. In the idiopathic forms of the disease, however, we are not dealing in the first place with increased thirst or blood changes, but with an unquestionable disturbance in the secretory functions of kidneys so that one has in fact to do with a primary polyuria. It has been maintained, especially by E. Meyer, that this results from an incapacity of the kidneys to secrete a urine of normal concentration. The specific gravity in such cases is notably low, generally not exceeding from 1.001 to 1.005, with quantities of urine ranging up to a reported maximum of 43 liters (45½ quarts) in a single day.

If, as suggested above, the functional incapacity lies in an inability to produce a suitable concentration of the urine so that the kidney output shall approximate that seen in ordinary conditions of renal efficiency in health, the patient, in order to eliminate the excretory products circulating in the blood, has to imbibe larger quantities of water than does the normal individual. When this general explanation is put to the test we must expect that after increasing the renal work to be performed, as for example after ingestion of sodium chlorid, the concentration of the urine will remain unincreased at all events, the excretory needs of the organism being met on such occasions by a sufficient augmentation in the urinary volume to carry away the added burden of waste. This, in essence, has been Meyer's belief.

It has been admitted that some concentration of the urine can be brought about when the kidneys in these unique cases are subjected to the influence of certain drugs, notably diuretics and opium. Forschbach[1] has demonstrated, nevertheless, that it is possible to induce the same results even without the use of pharmacodynamic agencies. Granting the truth of this, it becomes apparent that the underlying cause of the polyuria is not due to an inability of the kidneys to concentrate the secretion, but rather to a pathologic condition in which an exaggerated secretion of water is the determining factor. The abnormality is thus to be sought in those kidney elements which are concerned with the secretion of water. Whatever the ultimate truth may be, the conception of the abnormality of chronic polyuria as something associated with the output of a single urinary component, water, with a presumable increased irritability of the cellular structures involved in its secretion alone, furnishes a simple hypothesis in the search for its etiologic factor.

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[1] Schneider, Franz, Jr.: An Investigation of a "Haunted" House, Science, May 9, 1913, p. 711.

[1] Forschbach: Zur Frage des Konzentrierverm̈ogens der Niere beim Diabetes insipidus, Ztschr. f. klin. Med., 1913, lxxvii, 153.

THE BEDBUG

The alleged humor of which *Cimex lectularius* has been the subject should not obscure the serious rôle played by the bug in common with the fly, the mosquito, the flea and the louse as a conveyor of infection. Relapsing fever, bubonic plague, kala-azar, small-pox and typhoid fever have been transmitted by various species of the bedbug, and possibly the investigator might find here the explanation of otherwise inexplicable endemics in uncleanly neighborhoods. Epidemics of smallpox have been disseminated in cheap lodging-houses by this polecat among insects; and were it not for the frequent vaccinations compelled by health departments, such epidemics would very likely be more frequent than they now are.

Rucker[1] observes that in biting, the bug anchors itself to the skin with its pair of mandibles and then inserts its maxillae, which are shaped like gutters, and when placed together form a tube that is used to extract blood and to put saliva into the wound. Pathogenic bacteria may be conveyed in this way. The bedbug hides during the day and sometimes hibernates during the winter. When it lacks animal sustenance, it feeds on the juices of decayed wood or on the dust in floor cracks, and can go without food for a long time. It may continue its existence under adverse circumstances from season to season, in lumber camps, in summer houses, empty apartments and the like.

The housewife is greatly mortified by the creature's presence under her roof; but she is by no means always blameworthy. It may get into the traveler's trunk or satchel from an uncleanly hotel or sleeping-car or invade the home in the laundry or on the clothing; thus Manning[2] witnessed the migration of a bedbug across the aisle of a car from a sick man to the skirts of a party of women. Or it may migrate through walls from one house to another, sometimes in a continuous pilgrimage, especially when the dwellers of an infested house move away, thus cutting off the commissariat of the parasite. It may then escape through windows as well as walls, along water-pipes or gutters to new pastures. Thus the tidiest housewife may be victimized. Apart from ordinary dwellings, log cabins easily become infested; ships also entertain the bedbug in considerable degree. Poultry-houses, dove-cotes and the hiding-places of bats may easily become infested with the bedbug or nearly related species, and sparrows' and swallows' nests under eaves, which are often alive with the vermin, may be their portal of entry into houses. Ambitious medical graduates have been known to seek internships in hospitals noted rather for the vast amount of material they offer for study and experience than for their hygienic standards. Such fortunate interns should avoid sitting on the beds of hospital patients or letting their clothing come in contact with bedding during examinations; unfortunate transfers have been known to occur.

A thorough extermination of the bedbug would result also in the extermination of other dangerous insects infesting houses. The local application of boiling water and other substances[3] will kill a few bugs and drive others away, but serious efforts at extermination require fumigation. To be thorough, this should be done systematically by the municipality. Manning[4] has called attention to bedbug extermination as one of the measures to be employed in the prevention of all diseases whose virus is present in the blood of the host during the acute stage of the disease. Of all methods Manning says that there is none which would exceed in effectiveness the annual compulsory municipal fumigation of all habitations of man.

THE CELLULAR ELEMENTS IN MILK

The discovery of leukocytes along with bacteria, notably streptococci, in cow's milk has long been a matter of serious concern to American students of the various aspects of the milk question. The earlier careful examinations disclosed that these cells were present to a greater or less extent in most milks, but were less numerous in normal milk than in the milk of diseased animals. At one time it seemed imperative to take serious cognizance of the leukocytes, which were quite naturally identified with "pus cells." There is, of course, no intrinsic difference between these types of formed elements; and inasmuch as the occurrence of pus was associated with inflammatory processes, its appearance in the milk engendered the seemingly well-founded suspicion of diseased mammary glands as the source of the secretion examined. Not only was the idea of consuming pus as food repugnant to the average person, but in view of the indications of diseased udders which it inevitably conveyed there arose a demand to have an arbitrary number of cells to a certain quantity of milk fixed as a limit beyond which the milk was to be regarded as unfit for use. As a government official remarked, it was only a question to what extent the evil was to be endured.

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[1] Rucker, W. C.: The Bedbug, Pub. Health Rep., Nov. 15, 1912.

[2] Manning, Jacolyn Van Vliet: Bedbug Agent of Transmission of Infantile Paralysis, New York Med. Times, April, 1912, cited by Manning in Bedbugs and Bubonic Plague, Med. Rec., July 27, 1912.

[3] See Queries and Minor Notes Department, this issue.

[4] Manning, Jacolyn Van Vliet: Bedbugs and Bubonic Plague, Med. Rec., July 27, 1912.

During the attempts to fix a standard limiting the number of cells in acceptable dairy milk, the extensive investigations of this product secured under the widest diversity of conditions brought out clearly the fact that leukocytes occur in milk even when the gland structure shows no evidence whatever of inflammation. Therefore it was no longer necessary to assume that because so-called pus cells were detected in market milk it must inevitably be contaminated with the mammary secretion from one or more cows suffering from garget or allied conditions. In sections of functioning normal mammary glands isolated cells are found to be numerous in the capillaries and in the connective-tissue spaces between the alveoli, from which they make their way between the gland cells and appear in the milk. Russell and Hoffmann[1] made a large number of counts from the milk of cows in which there was not the slightest clinical evidence or any history of udder disease; they obtained results as high as 1,800,000, while 33 per cent. gave counts higher than 500,000 per cubic centimeter; 83 per cent. of those with slight udder disease or a history of garget gave counts of 500,000 per cubic centimeter or over. It appears that the retention of milk in the gland ducts and alveoli for an unusual period causes a large increase in the number of cells, for such conditions are favorable to their migration.

An investigation on the nature of the cellular elements present in milk, conducted for the British Dairy Farmers' Association by competent observers[2] has corroborated some of the foregoing statements. Cells, sometimes in enormous numbers, were found present in all milk, whether from the cow, goat, ass or man. Considerable variations in number occurred without apparent cause; and the presence of the slighter forms of nonsuppurative mastitis did not seem to influence definitely the number of these cells. It is of considerable import that no forms resembling polymorphonuclear leukocytes were detected, though certain multinucleated cells, undoubtedly derived from one of the layers of the glandular tissues of the udder, might be mistaken for polymorphonuclear leukocytes.

In the hope of shedding further light on the nature and source of the cells found in milk the British investigators have studied the histologic appearance of the udder itself more carefully. Their examination has shown the extreme paucity of polymorphonuclear leukocytes in the interalveolar tissue also, and so far as can be seen their complete absence in the lumina of the alveoli. From a survey of the entire situation the conviction has been reached that the cellular elements found in milk, either normally or in ordinary catarrhal or interstitial nonsuppurative mastitis, are tissue cells, and that "pus cells," in the ordinary acceptance of the term, do not appear in milk under these conditions.

Current Comment

HOW MUCH LOSS OF BLOOD IS COMPATIBLE WITH SURVIVAL IN THE HUMAN BEING?

This is a question which is frequently discussed. While it probably never can be solved with any degree of absolute accuracy, yet certain facts now at hand indicate an approximately correct answer, at least for a certain class of persons, namely, women at the time of childbirth. In post-partum hemorrhage the amount of blood lost naturally varies a great deal. It seems that a loss of 2 kg. (approximately 4 2/5 pounds avoirdupois) is not unusual, and cases are described in which the loss of from 2½ to 3 kg. (upward of 6 3/5 pounds avoirdupois) has been survived.[1] This is of course exceptional, but in most cases of excessive loss of blood from post-partum hemorrhage the loss is not accurately measured. Were that done, perhaps we should learn that survival of such great loss occurs oftener than now suspected. Here arises the further question, namely, How much blood has an adult, normal human being? The usual statement is, one thirteenth of the weight of the body. This is the result that Bischoff obtained from actual measurement of the blood in the bodies of two executed criminals. Other methods have given somewhat divergent results, usually considerably less. Behring's method, however, which consists in injecting a definite amount of tetanus antitoxin intravenously and then after a little while withdrawing a definite amount of blood and estimating the quantity of antitoxin in it, gave on calculation the total amount of blood as nearly one thirteenth of the body-weight. Assuming then that the blood is practically one thirteenth of the weight of the body, a person weighing, say, 130 pounds (about 60 kg.) has 10 pounds (about 4.6 kg.) of blood, and one weighing 156 pounds (about 70 kg.) has 12 pounds of blood (5.36 kg. approximately). Assuming, further, that the amount of blood is not materially different in the pregnant and nonpregnant woman, we reach the conclusion on the basis of the facts mentioned, that in post-partum hemorrhage the patient may survive a loss of about half of the total amount of the blood in the body. Whether or not this conclusion is applicable to other forms of acute loss of blood is not definitely determined, but it is probably not far out of the way.

HOUSING AND HEALTH

In much of the current discussion of housing and city-planning the need of a basis of observed fact is apparent. A recent analysis by Chalmers[2] of conditions in Glasgow is an important contribution to the difficult problem of the relation of house-room to death-rate. An examination of the age distribution of the population of Glasgow showed that a considerable proportion of the difference in the death-rate recorded for dwellings of various sizes could be ascribed to the large number of children in the smaller houses. The number of children under 5 years constituted 19 per cent. of the total population living in one-room houses, 14 per cent. in two-room, 7 per cent.

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[1] Russell and Hoffmann: Jour. Infect. Dis., 1907, Suppl. No. 3.

[2] Hewlett, R. T.; Villar, S., and Revis, C.: The Nature of the Cellular Elements Present in Milk, Jour. Hyg., 1909, ix, 271; 1910, x, 56; 1911, xi, 97; 1913, xiii, 87.

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[1] Gjestland: Norsk Mag. f. Lägevidensk., 1913, lxxiv, 593; abstract in The Journal, this issue, p. 1932.

[2] Chalmers: Med. Officer, 1913, ix, 202.

in three-room and only 4 per cent. in houses of four rooms and upward. Further analysis, however, showed that simple differences in age distribution would not explain altogether the differences in death-rate in houses of various sizes. Assuming a standard age and sex distribution, it was found that a population of 100,000 with the Glasgow death-rate would yield 2,024 deaths annually in one-room houses, 1,683 in two-room, 1,263 in three-room and 1,032 in houses of four or more rooms, while in institutions the deaths would number 3,649. With regard to the causes of death the problem becomes very complex. In infectious diseases, including pneumonia, the higher rate fell on the smaller houses. Diseases of the nervous system in adults, on the other hand, were apparently more prevalent among the inhabitants of the larger houses. Chalmers regards the evidence as showing that the children born in the smaller houses are from the start under a serious physical handicap which is related to some extent to the food-supply. This could be traced to the prevalence in this group of various forms of disease of the digestive organs. "In later life the influence of the birth surroundings did not wholly disappear, but these were obscured by the influences of adult life, which, as in the case of diseases of the nervous system, tended to become degenerative in type, and appeared more frequently among the occupants of houses of larger size." Whether or not these particular conclusions are found to be generally valid, it will be recognized that the careful scrutiny and statistical analysis on which they are based is the only method likely to lead to permanent results. In a word, it is not a simple task to determine the influence of housing on health. Comparison of death-rates without reference to age, sex, race or economic condition may be quite misleading.

WILL ARKANSAS STAND FOR THIS?

The following interesting item appeared in the Little Rock *Arkansas Gazette*, May 13, 1913:

> Fourteen graduate students of the Eclectic Medical University of Kansas City arrived in Little Rock on a special Pullman yesterday to take examinations before the State Eclectic Medical Board of Arkansas and be admitted to the practice of medicine.
>
> Graduates of the Kansas City school have to go to other states for examination because the Missouri State Board of Medical Examiners will not admit them to examinations. Thus arrangements were made this year for the eclectic students to be examined by the Arkansas board.

It should be stated that the medical school referred to has very little, if any, semblance to a "university." After repeated inspections the institution was rated low in Class C by the Council on Medical Education. Also for the last two or three years it has been reported as not in good standing by the Missouri State Board of Health and for that reason its graduates have been refused examination in Missouri for the license to practice. Reports received indicate also that this college is not recognized in twenty-two other states. Nevertheless, the college has apparently found a safe haven for its graduates in Arkansas, which, unfortunately, has parceled out to three separate boards the authority of examining into the qualifications of those who are to practice medicine. In this connection, the results of the examinations of graduates of the Eclectic Medical University by the Arkansas Eclectic Board during the last three years as compared with the results in other states during the same time are interesting. The following is based on the statistical data published in the last three state board numbers of The Journal:

Examined in	Examined by the Arkansas Eclectic Board			Examined by Other Licensing Boards		
	Passed	Failed	Per Cent. Failed	Passed	Failed	Per Cent. Failed
1910	4	0	0.	2	4	66.7
1911	11	0	0.	2	6	75.0
1912	13	0	0.	..	..	...
Totals..	28	0	0.	4	10	71.4

Note that of the twenty-eight graduates of the above-named college who were examined by the Arkansas Eclectic Board, every one passed, whereas of the fourteen graduates examined in other states in the same three years, ten, or 71.4 per cent., failed! Is this the "safeguard" Arkansas has established against incompetent and unqualified practitioners of medicine? Will Arkansas stand sponsor for the graduates of a low-grade medical college which in its own state and in twenty-two other states is not deemed worthy of recognition? Do not the people of Arkansas deserve as good doctors as the people of other states?

THE JOURNAL AN ENCYCLOPEDIA OF MEDICAL INFORMATION

In the Knocks and Boosts Department of this issue, Dr. Walter F. Hamilton makes some remarks which are so important as to deserve mention here for the benefit of other readers who possibly are not making the most of their annual investment in The Journal. In the first place, he keeps his copies of The Journal on file. He does not say whether he binds them permanently or temporarily or merely piles them on shelves. At any rate, he has them for reference. Knowing the vast number of topics covered week by week, and that practically all the live topics of the day are discussed in its columns, he refers to his index and hunts up what has been said by The Journal and its contributors on any particular subject that arises. The index is made for just this purpose: to preserve and to use in after years. Thousands of physicians use it regularly, and any physician who may not be making regular use of it is neglecting one of the most valuable features of The Journal.

THE OPIUM EVIL A NATIONAL RESPONSIBILITY

Since the opium exclusion act of 1906, the United States government, which initiated the international movement to regulate commerce in drugs, "has taken no further definite action for federal control of the opium and allied traffics of the United States."[1] Of the foreign nations cooperating in the antinarcotic movement, many have enacted drastic domestic laws on the matter. But here is still staged the spectacle of separate states with differing laws inadequate to the situation both in detail and in enforcement. The efforts are not to be undervalued of those states which have seen the drug peril in this country and have used the means within their power to control this evil; but at the conference soon to be resumed at The Hague, significance will lie not in our stringent individual state laws but in the quality of our federal legislation; not in sporadic local efforts but in laws expressing the attitude of the nation as a whole. Meantime "there are few if any subjects regarding which legislation is in a more chaotic condition than the laws designed to minimize the drug-habit evil."[2] It should not be forgotten that three years ago the number of drug addicts in this country was estimated at more than one million;[3] that 400,000 pounds of opium are imported into the United States and consumed yearly, and 150,000 ounces of cocain illegitimately used;[2] that drugged "soothing syrups," medicated "soft drinks," and habit-forming "treatments" galore still spell prosperity for their exploiters, and that almost daily are seen such reports as "cocain used by sons of prominent families," "boys use heroin," "heroin cough-tablets bought daily at confectionery store by school-girls of 11 and 13"; or yet again, "physicians sell cocain to drug-fiends," "doctor sells cocain to boys."[4] Such facts must stir every one to respond to President Wilson's special message of April 21, 1913:

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[1] Report of the Secretary of State on anti-opium legislation, referred to Congress, April 21, 1913, by President Wilson.

> It will always be, I am confident, a subject of gratification to the nation, that this government, realizing the extent of the opium and allied evils, should have initiated the world-wide movement toward their abolition. At this vital period of the movement to fail to take the few final steps necessary definitely and successfully to conclude the work would be unthinkable, and I therefore trust that there may be no delay in the enactment of the desired legislation and the consequent mitigation if not the suppression of the vice which has caused such world-wide misery and degradation.

We have commented[5] on the admirable efforts made by the Chinese nation to free itself from the opium traffic. Surely a young and vigorous country like ours will not slothfully permit itself to be overcome by the evil which has been so manfully withstood by the ancient land of China, nor permit in its own legislation a weakness which might tempt China from the "unswerving sincerity" of its policy in recent years.

INTERN WORK REQUIRED FOR GRADUATION

Rush Medical College will require[1] all students entering for the summer quarter of 1914 and thereafter to register for a five-year medical course. The fifth year is to be spent by the student either in graduate work in one of the departments of the college or as an intern in an approved hospital under the constant supervision of the college faculty. The fifth-year course was established in 1905, but was made optional owing to the wording of the Illinois practice act which required that only graduates of medical schools could serve as interns in hospitals. The practice act has since been amended, thereby permitting the college to require the intern year prior to granting the degree. This makes three medical colleges which have definitely decided to require the fifth year of intern or other clinical work. In 1910[2] the University of Minnesota College of Medicine adopted the requirement for all students entering in the fall of 1911 and thereafter. A few weeks ago also[3] Leland Stanford Junior University Department of Medicine announced a similar requirement for all students entering in 1914 and thereafter. There is also one state, Pennsylvania, which after Jan. 1, 1914, will require that every candidate in order to be eligible to receive a license to practice in that state must have first obtained an internship, which, however, need not necessarily have been obtained prior to graduation, but must have been taken in a hospital approved by the Pennsylvania board. There is much to say in favor of the college requiring the internship prior to granting the degree. The chief advantage is the constant check which the college will or should have on the intern's work; this will be in marked contrast to the haphazard manner in which interns, in some instances at least, carry out their obligations to the hospitals. This new arrangement gives assurance of a better training for the intern, of more satisfactory intern service for the hospital, and of safer and more thorough care of the patients in the hospital. Altogether, this next great step in the advancement of medical education, which is apparently to be brought about in the near future, will provide for the public more thoroughly qualified and skilled practitioners of medicine.

MEDICAL RESEARCH AND MEDICAL EDUCATION

The announcement was made last week[1] that a million dollars had been given to develop medical research at the University of California. This generous gift will provide a research institute on the Pacific coast comparable with the Rockefeller Institute in New York City. It will differ from the Eastern institution, however, in that it will be closely connected with a medical school. This is as it should be. While medical research has no place in the undergraduate medical curriculum, its presence in the medical school is of the highest importance. It creates an atmosphere of investigation with which every medical student should become imbued. It is carried on by a group of workers who are also medical teachers and the best teachers are always those who are also actively engaged in medical research. Medical research is, in fact, the very soul of medical education; without it the medical school is likely to become a mere machine, teaching the discouraging facts regarding morbid processes, sickness and death without the inspiration of encouragement and hopefulness which comes from delving after new truths and the discovery of new means of alleviating disease and pain. In the medical school without research the highest ideal held by the student may often be the financial returns he may obtain from his practice. In the research school, on the contrary, the student, by the time he graduates, is led to realize that his study of medicine has just begun and also to realize how boundless are the possibilities for usefulness in the field of medicine. It is undoubtedly the latter school which turns out the best practitioners of medicine. It also turns out those who are better prepared to serve their communities in promoting improved sanitary measures whereby needless sickness and suffering are prevented. Our congratulations are extended to the people of California and of the Pacific coast on their recent good fortune.

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[2] Digest of Laws . . . Relating to Habit-Forming Drugs, Pub. Health Bull. 56, 1912.

[3] Kebler, L. F.: Habit-Forming Drugs, Farmer's Bull. 393, Bureau of Chemistry, 1910.

[4] Newspaper clippings, April, 1913.

[5] China Suppressing the Opium Habit, editorial, The Journal A. M. A., Dec. 7, 1912, p. 2078.

[1] Illinois News, this issue.

[2] A Year as Intern in a Hospital, Current Comment, The Journal A. M. A., Oct. 1, 1910, p. 1206.

[3] California News, The Journal A. M. A., May 10, 1913, p. 1467.

[1] California News, The Journal A. M. A., June 7, 1913, page 1802.

THE MINNEAPOLIS SESSION

This issue of The Journal will reach its readers on the eve of the Minneapolis session. The American Medical Association this year holds its convention under most favorable circumstances, the University of Minnesota being hostess on her spacious campus. The arrangements for the meeting are completed and promise a pleasant and profitable time. The elaborate descriptions of these arrangements and of the city in which the meeting is to be held appeared in The Journal, May 10. As the members register they will be given copies of the official program, badges, invitations and complete schedules of all the events of the week. The report of the legislative proceedings of the meeting will begin in the issue of June 21 and will continue in following numbers. The publication of the scientific papers read before the various sections will commence in the first issue of July and their presentation will be pushed rapidly. The thousands who will attend the session (and doubtless many will be induced to come at the last minute by the convenient location) are but a small percentage of those who will think next week of the scenes being enacted on the campus of the University of Minnesota. There is every prospect of a meeting that will be noteworthy in pleasure and profit.

THE PICTURES OF THE OFFICERS

We take pleasure in presenting in this issue a portrait of the President-Elect, John A. Witherspoon of Nashville, Tenn., who will be installed in office, next Tuesday morning at Minneapolis, as President of the American Medical Association. We also present two groups of pictures of some of the section officers, one group of the chairmen and one of the secretaries. These two groups comprise most of the section officers at present serving whose pictures have not previously been given.

Advertismo Occulta—A Recent Disease.—Advertismo occulta is not yet described in text-books, though numerous sporadic examples have occurred within a year. Students of mental diseases would describe it as a form of "exhibitionism." It is an affection of the sense of justice. Recently a well-known surgeon came down with it. A review of the reported cases seems to show that this disease particularly affects surgeons. In brief, advertismo occulta is that form of advertising in the lay press or magazines, of which the subject (hero) is not supposed to be aware that he is being described.—B Joseph in *Vermont Med. Monthly.*

Medical News

ARKANSAS

Licenses Revoked.—The secretary of the State Medical Board of the Arkansas Medical Society announces that on May 14 the board in regular session revoked the licenses of Drs. F. A. Goodwin, Magnolia, and J. M. Byrd and A. J. Whitworth, Hot Springs, for publicly advertising special ability to cure chronic and incurable diseases.

Honor Dead Members.—At the annual meeting of the Arkansas Medical Society, Dr. J. L. Greene, Little Rock, reviewed the life of the late Dr. Edwin R. Dibrell, Little Rock. Dr. A. M. Hathcock, Harrison, paid a tribute to the memory of Dr. A. J. Vance, Harrison, and Dr. H. Moulton, Fort Smith, reviewed the lives of Drs. Fred A. Mickel, Van Buren, W. J. Pittman, Fort Smith, J. S. Sibley, Paris, A. J. Vance, Harrison, J. D. Bradley, Fort Smith, and O. M. Bourland, Van Buren, deceased members of the society.

Personal.—Dr. T. J. Stout, Brinkley, has resigned from the State Board of Health.——Dr. George S. Brown, Conway, has been elected health officer for Faulkner County.——Dr. Robinson Bosworth has resigned as superintendent of the State Tuberculosis Farm, Booneville, to resume practice in New York City.——Dr. S. P. Vaughter has been elected physician of the School for the Blind, Little Rock; Dr. J. G. Watkins, oculist and aurist for the Deaf Mute Institute, Little Rock, and Drs. Anderson Watkins and Sterling Bond have been appointed physicians to the latter institution.——Dr. William A. Brooksher has been elected chief of staff and Dr. J. G. Southard, secretary of the medical staff of Sparks Memorial Hospital, Fort Smith.——Dr. Olive Wilson, Paragould; has been appointed city health officer.

New Officers.—Annual meeting and banquet of the Alumni Association of the Medical Department of the University of Arkansas, held in Little Rock, May 21: Dr. T. M. Fly, Wampoo, reelected president and Dr. W. M. Wear, Etna, secretary.——Cleburne County Medical Society at Heber Springs, May 19: president, Dr. F. G. Richardson; secretary-treasurer, Dr. Horace E. Ruff, both of Heber Springs.——St. Francis County Medical Society at Forrest City, May 13: president, Dr. J. C. Reynolds, Colt; secretary-treasurer, Dr. D. A. Pelton.——Ashley County Medical Society at Hamburg: president, Dr. A. D. Knott, Wilmot; secretary-treasurer, Dr. A. E. Cone, Portland.——Fulton County Medical Society at Salem: president, Dr. C. W. Culp, Mammoth Springs; secretary-treasurer, Dr. L. F. Weathers, Salem.——Arkansas State Negro Medical Association, twentieth annual meeting, Hot Springs, May 29-30: president, Dr. J. G. Thornton, Little Rock; secretary, Dr. A. A. Womack, Little Rock.

ILLINOIS

Clara Barton Memorial.—The alumnae of Rockford College are endeavoring to secure a fund of $500,000 to put up the Clara Barton Science Building with a properly equipped laboratory, and to endow a Clara Barton chair of biology and bacteriology.

Personal.—Dr. Sidney D. Wilgus, superintendent of the Kankakee State Hospital, has resigned.——Dr. and Mrs. E. E. Gilder, Peoria, have returned from abroad.——Dr. William Hecker, Watseka, is returning from Europe.——Dr. William M. Freeman, Crystal Lake, was operated on for appendicitis in St. Joseph's Hospital, Elgin, June 2.——Dr. Thomas O. Felts, Bloomington, has been adjudged insane and committed to the Peoria State Hospital.——In the case of Drs. C. F. Brian, Bellmont, and R. L. Moter, Browns, defendants in a suit for alleged malpractice, the jury promptly brought in a verdict exonerating the defendants.

Chicago

Actors' Hospital.—Plans have been made for the erection of an actors' hospital to be erected at Hoyne Avenue and West Monroe Street, to cost $50,000. Dr. Max Thorek is to be at the head of the institution.

Health Department Plans for Summer.—At a conference of the health department and representatives of charity institutions, June 5, plans for summer relief work were formulated. These plans include the continuation of the work of last year, free medical attention, free ice to the poor and the welfare of children.

Clinical Year Compulsory.—Rush Medical College, which has for a number of years strongly recommended a fifth clinical year as intern in a hospital, or its equivalent, has made this compulsory for the class entering in 1914. This fifth year is to be spent either in graduate work in one of the departments of the college or as an intern in an approved hospital under the constant supervision of the college faculty.

Medical Department of State University.—The bill taking over the College of Physicians and Surgeons by the University of Illinois was advanced to its third reading in the legislature, June 5, after the defeat of amendments offered by those opposing the project. The state is being asked to appropriate $200,000 for maintenance of the institution, this being a part of the $4,300,000 appropriation asked for the University of Illinois.

Personal.—Dr. Isaac Freemmel has been appointed assistant superintendent at the Elgin State Hospital.——Dr. A. T. Paulson was elected chief medical examiner of the Independent Order of Svithiod at the meeting of the Grand Lodge, May 30.——Dr. Morris L. Loevenson has returned after three years abroad.——Dr. J. A. Spiegel, an intern at the German Hospital, was severely injured May 31, while attempting to board a street car.

Sanatorium Directors Reorganize.—The board of directors of the Chicago Municipal Tuberculosis Sanatorium was recently reorganized by the election of Dr. Theodore B. Sachs as president and Dr. George B. Young as secretary. This reorganization was necessitated by the vacancy in the presidency caused by the resignation of Mr. Harlow N. Higinbotham and the recent appointment made by Mayor Harrison of Mr. W. A. Wieboldt as third member of the board.

Alumni and Faculty Smoker.—On June 6, a smoker and entertainment was given to the alumni and faculty of the College of Physicians and Surgeons by the Alumni Association. Addresses were made by President James of the University of Illinois and W. L. Abbott, president of the board of trustees. Dr. Edward E. Heintz, retiring president of the association, made a plea for financial support for the college, stating that "no medical school whose only support consists of fees paid by students can be maintained with modern students."

Alienists and Neurologists to Meet.—The Chicago Medical Society announces a meeting of alienists and neurologists to be held in Chicago, June 23-26, with headquarters at the Sherman House. The object of the meeting is to discuss mental diseases in their various phases. At the first meeting held in April, 1912, a resolution was offered dealing with the prevention of insanity, and the various forms of delinquency, and it is hoped that at this meeting, after a full discussion, a definite plan can be formulated and recommended to the several state legislatures. A varied program is offered in addition to this discussion, and on June 24 a dinner is to be given to the visiting alienists. Dr. Harold N. Moyer is chairman and Dr. W. T. Mefford, secretary of the committee on arrangements.

KENTUCKY

University Adopts Higher Preliminary Requirements.—Dr. W. E. Grant, dean of the University of Louisville Medical Department, reports that the executive committee of the faculty raised the entrance requirements to two years of collegiate work, beginning October, 1914.

New Officers.—Southwestern Kentucky Medical Association at Paducah, May 20-21: president, Dr. G. W. Payne, Bardwell; secretary, Dr. Herbert H. Hunt, Mayfield.——Kentucky State Association of Railway Surgeons at Louisville, May 14-15: president, Dr. D. Yandell Roberts, Louisville; president-elect, Dr. H. C. Jasper, Richmond; secretary, Dr. James B. Kinnaird, Lancaster.

Board Adopts Higher Requirements.—A report indicates that all applicants for license to practice medicine in 1918 and thereafter will be required to have completed in addition to a standard four-year high-school course, two years of work in a recognized college of liberal arts, prior to beginning their medical work. This will apply to all applicants matriculating for the session of 1914-15 and thereafter.

MARYLAND

Summer School at Johns Hopkins.—The Johns Hopkins summer school opened June 2, with fifty-one students. The course will last six weeks and special courses will be given for graduates. This is the first definite organization and follows in the footsteps of the academic department. The teachers in the course are Drs. John M. T. Finney, J. C. Bloodgood, Guy L. Hunner, J. P. Pratt, L. V. Hamman, C. G. Guthrie, C. G. Snyder, E. K. Marshall and L. G. Rowntree.

Personal.—Dr. A. C. Eckerdt, pathologist and assistant physician at the Springfield State Hospital, has resigned to accept a similar position with the Montana State Hospital, Warm Springs.——Dr. Joseph Clement Clark, Sykesville, has been reelected superintendent of the Springfield State Hospital.——Dr. Charles J. Carey, Sykesville, has accepted the superintendency of the new State Hospital for the Insane, Cambridge.——Drs. Claude B. Hammil and Ward D. Disbrow have been appointed members of the staff of the Springfield Hospital for the Insane.

Baltimore

Physicians to Aid Charity.—A new district board of the Federated Charities to be composed exclusively of physicians under the chairmanship of Dr. Arthur M. Shipley, was organized May 22.

Plans for General Hospital.—Plans for the improvement of the Maryland General Hospital include plans for the building of a surgery, a ward for colored patients and additional private wards. All of these are to be carried into completion by the Woman's Auxiliary of the hospital.

Alumni Association Meeting.—At the annual meeting of the Alumni Association of the Medical School of the University of Maryland, June 2, the following officers were elected: Dr. John I. Pennington, president; Drs. Robert P. Bay, H. D. Fry and J. T. King, vice-presidents; Dr. A. H. Carroll, recording secretary; Dr. J. Carroll Monmonier, Jr., Catonsville, assistant recording secretary; corresponding secretary, Dr. J. T. Smith; treasurer, Dr. John Houff; executive committee, Drs. G. Lane Taneyhill, Jr., C. R. Winterson, Hanover, B. Merrill Hopkinson, G. H. Hocking, Gorans, and E. T. Harle, Jr.

Personal.—Dr. L. K. Walker has been appointed chief resident physician in charge of the Maryland General Hospital.——Drs. Caroline B. Towles and John G. Jay have sailed for Europe.——Drs. John Ruhrah and John Howland have been appointed consultants for pediatrics at Bayview Hospital.——Dr. J. Morris Slemons has been appointed director of the new woman's clinic and professor of obstetrics and gynecology at the University of California, San Francisco.——Dr. A. H. Morse has been appointed associate professor of obstetrics and gynecology in the same institution.——Dr. William S. Thayer has been elected president of the Maryland Progressive Service.——Dr. Claude A. Stonecipher, charged with having given money to a woman for the purpose of having an illegal operation performed, was acquitted.——The damage suit for $50,000 against Dr. Archibald C. Harrison for alleged malpractice for treating a broken bone in the foot, was nolle prossed by the plaintiff.

MONTANA

Personal.—Dr. E. A. Ewart, Custer, was injured in a railroad wreck near Moorhead, Minn., May 1.——Dr. J. M. Scanland and family, Warm Springs, sailed from San Francisco, June 5, on a tour around the world.

Health Officers Elect.—At the annual meeting of the Montana Public Health Officers Association held in Great Falls, May 13, Dr. E. G. Balsam, Billings, was elected president, Dr. A. W. Deal, Butte, vice-president, and Dr. W. F. Cogswell, Livingston, secretary.

State Sanatorium Opened.—The State Tuberculosis Sanatorium, Galen, near Warm Springs, has now eleven patients and is fully prepared to care for all who may apply. Any patient who is not able to pay the expense of $15 per week, may apply to the county commissioners and will be admitted at an expense of $5 per week, half of this amount being defrayed by the county.

NEW JERSEY

Hospital Opened.—St. Mary's Hospital, Orange, was thrown open for public inspection May 30, 31, and June 1. After the installation of equipment, the building will be opened to receive patients.

New Officers.—Warren County Medical Society at Phillipsburg, May 6: president, Dr. Frank S. Gordon, Blairstown; secretary, Dr. William J. Burd, Belvidere.——Passaic County Medical Society at Paterson, May 13: president, Dr. A. F. McBride; secretary, Dr. C. B. Mitchell, both of Paterson.——Cape May County Medical Society at Cape May Courthouse: president, Dr. Clarence W. Way, Ocean City; secretary, Dr. Eugene Way, Dennisville.

NEW MEXICO

State Board Election.—At the annual meeting of the State Board of Health held in Santa Fe, Dr. L. G. Rice, Albuquerque, was elected president and Dr. W. E. Kaser, East Las Vegas, reelected secretary-treasurer. The other members of the board are Drs. James A. Massie, Santa Fe, W. T. Joyner, Roswell, G. V. Hackney, Socorro, W. R. Lovelace, Fort Sumner, and C. W. Gerber, Las Cruces.

Good Showing for Sanatorium.—The annual report of the Valmora Industrial Sanatorium, Watrous, for the year ended March 31, 1913, shows that sixty-eight patients were received during the year, sixty-seven patients were discharged, two died and thirty remained in the sanatorium April 1, 1913, one less than at the same time in the previous year. Of the discharged patients, fifteen were incipient cases; thirty-eight moderately advanced; nine far advanced and one was non-tubercular. The results of treatment in these cases were twenty-one apparently cured, twenty-one progress of disease arrested, fifteen improved, three not improved, one non-tubercular and two deaths. Fifty-six of the sixty-three gained in weight, five lost weight and two were not weighed. The average gain in weight was 11.63 pounds, the average loss 4.65 and the greatest individual gain was 40.25, and the average length of stay was one hundred and fifty-two days. During the year three new cottages, 14 by 14, were built and furnished, and a porch 10 by 70 was added to the hospital. The institution has been crowded for room and has been obliged to turn away several patients. The question of providing work for the patients presents the same difficulty as last year. The superintendent has commenced the manufacture of pottery, the clay being taken from a bed on the property of the sanatorium. He hopes that the product can be marketed at a price sufficient to pay ordinary wages to the patients who have no money and also to provide employment and occupation for the patients.

NEW YORK

Society Organized.—Physicians of Tonawanda and North Tonawanda met May 28 and organized the Twin City Academy of Medicine.

Schenectady Fights Rats.—The Schenectady health department has begun a campaign against rats. The method of extermination will be that used in San Francisco. A few rats will be inoculated with azoin and will be turned loose to spread the disease among other rodents.

Open-Air School for Rochester.—The Rochester Public Health Association and the Board of Education have resumed their open-air work on a tract of land at the foot of Cobbs Hill where thirty-five children of the open-air school have commenced their work. It is proposed to build a new structure on the ground, capable of accommodating one hundred pupils.

Personal.—Dr. LeRoy Charles Grau has been appointed resident physician at the New York State Hospital for Crippled and Deformed Children, West Haverstraw, N. Y.——Members of the Cortland County Medical Society tendered a banquet to Dr. H. T. Dana, Cortland, May 26, in celebration of his semi-centennial as a practitioner of the county.——Dr. T. C. Sawyer, Auburn, has succeeded Dr. William Brady, Elmira, as physician to the Auburn State Prison.——Dr. Myron D. Lipes, Cobleskill, who has been ill with septicemia, is under treatment at Mount Clemens, Mich.

Hospital News.—A large parcel of land at Hill Crest, Poughkeepsie, including a residence, has been offered by D. W. Wilbur and wife as a site for the new Benedictine Hospital. The land is valued at $75,000.——The new Ithaca City Hospital is practically completed and will be formally opened August 1.——Plans for the new Infants' Summer Hospital, Charlotte, have been completed and the contract for the construction has been let. The new buildings will not be completed until late in the fall and the present buildings will be used during the summer.——A friend of General William Verbeck has given a new hospital building for the Manlius school, at a cost of about $8,000.——An additional story is to be added to the Crouse-Irving Hospital, Syracuse, which will provide for twenty-five additional patients. It is expected that the addition will be ready for occupancy before the close of the summer.——The Oswego County Tuberculosis Hospital is nearly completed and will be formally opened July 1. Dr J. Roy Allen, Orwell, has been appointed superintendent of the institution.——Genesee Hospital, Syracuse, formerly a private institution, has been opened by the State Board of Charities as a general hospital.

Death-Rates Twenty-Eight Years Ago and Now.—The *Monthly Bulletin* of the New York State Health Department makes an interesting comparison of death-rates from the most common diseases of various periods during the past twenty-eight years. Childhood mortality has been a steadily decreasing percentage of the total. It has fallen from one-third of the deaths to one-fourth; from over 600 deaths per 100,000 population to 400. The actual mortality among children was hardly more in the last three years than it was twenty-five years ago and is considerably less than it was fifteen or twenty years ago. Typhoid fever was at its highest mortality midway of the periods and lowest in the most recent. Compared with the total mortality, the percentage of typhoid fever deaths was 1.4 until ten years ago when it began to fall and is now less than 1 per cent. of the total. In 1890 there were 27 deaths per 100,000 population while now there are 14, a fall of nearly one-half. Diphtheria has decreased steadily from 5 per cent. of the total mortality to 1 per cent.: from 100 deaths per 100,000 population to 22. The actual mortality now is only one-third what it was twenty-five years ago. Tuberculosis of the lungs has decreased steadily but to a less degree. In the first decade following 1885 about one-eighth of the total mortality was from this cause; in the last decade it has fallen to about 10 per cent. of the total. In the first decade there were 214 deaths from tuberculosis per 100,000 population and there are still communities in which that rate persists but the rate for the entire state is 160. This is a distinct saving of 54 per 100,000 of the entire population. There has been an actual increase of but 1,500 deaths during the last decade while the population has nearly doubled. The death-rates from cancer are not so encouraging. In 1912 there were reported in this state 8,234 deaths from cancer, an increase of 300 over 1911. The state death-rate from cancer was 85.9 per 100,000 of the population and to this cause was attributed 5.8 per cent. of all deaths. The urban rate was 83.6 and the rural rate was 92.9. One reason for this is that there are more people past middle life living in the country than in the cities. It has long been noted that the mortality from cancer was highest in the central counties of the state and the table shows a continuance of this. Twenty-five years ago there were only 2,000 deaths from cancer.

New York City

Class Reunion.—The class of '98 of Brooklyn Hospital Medical College held its fifteenth annual reunion, May 10, Dr. Anthony Bassler presiding.

New Clinic.—A new clinic for the treatment of special diseases has been opened at 98 Amity Street, Brooklyn, in connection with Long Island College Hospital.

New Straus Milk Stations.—Nathan Straus has opened nine more milk stations in different congested sections of the city. In addition to supplying infants, milk which has been properly pasteurized is sold at one cent a glass.

Hospital Opened.—At the opening of the new Beth-David Hospital, June 1, Dr. Abraham Jacobi, speaking for the New York Medical Society, stated his belief that it would be better to build twenty small hospitals at $500,000 each and approximately twenty blocks apart, than to spend $10,000,000 for a single institution. The Beth-David Hospital has accommodation at present for eighty patients.

Fresh-Air Work Begins.—The New York Association for Improving the Condition of the Poor opened Sea Breeze, its fresh-air home at Coney Island, on June 1, and the first party of convalescents has been taken there. As sickness among the poor has increased the demands made on the association for aid, the president, R. Fulton Cutting, has issued an appeal for funds for the extension of the fresh-air work.

Night and Day Camp for Tuberculosis Boat.—The tuberculosis committee of the Brooklyn Bureau of Charities has decided to extend the usefulness of the open-air tuberculosis hospital, maintained on board the *Rutherford* at the foot of Fulton Street. Beginning with June 1, in addition to its use during the day, the boat will be maintained for a night camp for men who are compelled to work while undergoing treatment at the local clinic.

Personal.—Dr. Rosalie Slaughter Morton sailed for South America, May 31.——Dr. Thomas A. McGoldrick, surgeon of the police department of Brooklyn, has recovered from appendicitis for which he recently had an operation.——Dr. and Mrs. Frederick Brown Humphreys sailed for Europe, June 6.——Columbia University has conferred the degree of doctor of science on Dr. William Crawford Gorgas, M. C., U. S. A., and Dr. Alexis Carrel. Dr. Carrel has sailed for Germany where he will make further studies and experiments on infantile paralysis.——Dr. Raymond Francis Charles Kieb, assistant physician at Dannemora Hospital, has been appointed by the state superintendent of prisons superintendent of the Hospital for the Criminal Insane, Matteawan.

Acute Poliomyelitis in New York City During 1912.—During 1912, 504 cases were reported with 57 deaths, a case fatality of 11.1 per cent. and a case incidence of 9.8 per 100,000 of the population. In 1911, 358 cases and 9 deaths were reported to the Department of Health, a case fatality of 2.5 per cent. and an incidence of 7.2. The increase during 1912 occurred chiefly in Manhattan where the case incidence rose from 9.2 in 1911 to 14.4 per 100,000 in 1912. As compulsory notification did not become effective until Jan. 1, 1911, no cases beginning previous to that date are included. Owing to delays on the part of the physicians many reports are not made until months, and not infrequently one or two years, have elapsed. Therefore many of the cases of 1912 began in 1911.

New York Physicians May Practice in New Jersey.—Dr. Louis J. Ladinski, New York City, was summoned to attend a lawyer who shot himself in Newark, in 1911. The lawyer's estate was found to be insolvent and the trustee in bankruptcy sued Dr. Ladinski for a recovery on a mortgage of $2,000. The doctor responded with a counter claim for $2,500 for medical services. The trustee then asked to have the counter claim thrown out on the ground that while a New York physician might practice in New Jersey without subjecting himself to punishment, he could not legally collect pay for such services. The Supreme Court, however, decided that the New Jersey laws left entire freedom to physicians of other states to render occasional professional services in New Jersey and, incidentally, to recover for services so rendered.

Pension for Rockefeller Institute Members.—Pensions for its members and associate members have been provided by the governing boards of the Rockefeller Institute for Medical Research, and have been financially secured by the generosity of Mr. John D. Rockefeller, who has with this purpose in view increased the endowment of the institute by a gift of securities amounting to about $500,000. The pension rules which have been adopted provide three-quarters-pay pensions for members of the insitute retiring at the age of 65 after fifteen or more years of service, and pensions of from one-half to three-quarters of full pay, according to the length of service, for members and associate members who retire at 60 years of age. There is also a provision for total disability after ten years of service, and for widows and orphaned children, at one-half the scale on which members of the staff are pensioned.

Recommendations for Care of Defective Children.—At the last meeting of the New York Psychiatrical Society on May 14, the following recommendations for the proper care of feeble-minded and defective children were adopted: 1. All feeble-minded children who have reached school age should be registered as such through the agency of public schools, inasmuch as the school laws compel their attendance during school age. 2. The care of feeble-minded children thus registered should be reportable to a central bureau of the state. 3. All such feeble-minded children not teachable in the public schools in subnormal or ungraded classes should be segregated in colonies or institutions under the control or supervision of the state commission. 4. A state commission should be established, such commission to have supervision of all feeble-minded children and have direct charge of all those in state institutional care. Feeble-minded children who have left school or passed school age and are not in schools or colonies should be under supervision of the state commission. 5. Parents who are able to make proper provision for their feeble-minded children, may, on proper petition to the state commission, be permitted to care for them having due regard to the best welfare of such children and the safety of society. 6. The commission should receive power from the legislature to carry out the provisions of these recommendations. For the purpose of efficiently carrying out this scheme, it is strongly recommended that the governor appoint a committee of experts to investigate and prepare a practicable scheme for the carrying out of the suggestions recommended.

PENNSYLVANIA

New Hospital.—Physicians of the North Penn Clinical Association have organized a hospital at Sellersville, using the building of Dr. James P. Pursell.

New Officers.—Wayne County Medical Society at Farview Hospital for the Criminal Insane, May 22: president, Dr. R. W. Brady, Honesdale; secretary, Dr. F. A. Lobb, Hawley.

Portrait Given to Society.—Franklin County Medical Society at its quarterly meeting, May 20, was presented with an oil painting of Dr. William Grubb, a member of the society who died in Greencastle in 1885. Together with the portrait, a quaintly lettered metal sign from the door of Dr. Grubb's office was presented to the society. Dr. J. C. Gilland, Greencastle, made the presentation address.

Company to Pay for Epidemic.—In the case of Kohlmeyer against the Ohio Valley Water Company for damages resulting from the illness and death of a small child from typhoid, due to polluted drinking water, the court has decided, on the testimony of the attending physician supported by the opinion of experts as to the probable cause of death, in favor of the plaintiff, assessing damages of $1,500. The plaintiff claimed that in 1909, the supply of filtered water from the wells became scanty and direct connection was made by the defendant company with the river, and unfiltered water polluted with the sewage of Pittsburgh, was drawn through its mains, resulting in 2,400 cases of gastro-enteritis and about 100 of typhoid.

Philadelphia

Small-Pox on Battleship.—A case of small-pox was discovered on the battleship *Wisconsin* at League Island Navy Yard, May 29, and as the result the entire ship's company has been placed in quarantine.

Gift to Dr. Tyson.—At the stated meeting of the Northern Medical Association of Philadelphia, a loving-cup was presented to Dr. James Tyson in commemoration of his fiftieth year in the medical profession.

Medical College Reception.—The Medical College of Philadelphia gave a reception at the Bellevue-Stratford, May 30, to Thomas McCrae, M.D., and Philip B. Hank, Ph.D., recently elected professors in Jefferson Medical College.

Rejuvenation Day.—Philadelphia graduates of the University of Pennsylvania celebrated rejuvenation day at Grenloch Park, N. J., June 3. Dr. B. Franklin Stohl was secretary and Dr. Morris B. Miller, treasurer of the committee in charge.

To House Feeble-Minded.—A contract has been awarded by Director Neff of the Department of Health and Charities for the construction of two buildings and the laying of a sewage system on a portion of the farms owned by the city at Byberry. These structures will form part of the Home for Feeble-Minded Women and Children.

Portraits Presented.—At the annual commencement of nurses of the American Hospital for Diseases of the Stomach, a portrait of Dr. Lewis Brinton, founder of the institution, was presented to the hospital by Dr. E. J. Asnis.——A large painting of George H. Stewart, Jr., president of the American Oncologic Hospital, was presented by the board of trustees of the medical staff.

Commencements.—On June 7, Jefferson Medical College conferred degrees on a class of 126 at the eighty-eighth annual commencement. The honorary degree of LL.D. was conferred on Dr. Abraham Jacobi, emeritus professor of diseases of children, College of Physicians and Surgeons, Columbia University, and on Francis Preston Venable, president of the University of North Carolina.

Action Against Abuse of Vivisection.—Dr. Joshua E. Sweet, assistant professor of surgical research at the University of Pennsylvania, appeared, June 7, before Magistrate Hagerty for a hearing on charges, brought by members of the Women's Pennsylvania Society for the Prevention of Cruelty to Animals, that cruelties are practiced on animals under his charge at vivisection laboratories at the university.

Personal.—Dr. Ray Parker has been appointed on the staff of Dixmont Hospital.——Dr. John F. Moffet is reported to be seriously ill as the result of poisoning from bichlorid of mercury, accidentally self-administered.——Dr. C. N. Sturtevant, charged with causing the death of a child by running him down by an automobile, was exonerated by a jury, May 20.——Dr. Reuel Stewart recently celebrated his eighty-fourth birthday anniversary.

Musser Memorial Tablet.—A bronze mural tablet, 20 by 30 inches, designed by Dr. R. Tait McKenzie, was presented to the Hospital of the University of Pennsylvania. In the center of the tablet is a portrait of the late Dr. John H. Musser; it bears the inscription "Dr. John Herr Musser, 1856-1912, professor of clinical medicine in the University of Pennsylvania, 1898-1912. Hundreds call themselves your creatures who by you have been restored. Pericles, Act II, Scene 3."

Alumni Meetings.—At the forty-first annual business meeting of the Jefferson Alumni Association, June 6, Dr. Charles S. Mangum, Chapel Hill, was elected president; Drs. Charles F. McBurney, Altoona, G. T. Matlack, Wilkes-Barre, J. Coles Brick and John W. West, Philadelphia, vice-presidents; Dr. Henry K. Gaskill, recording secretary; Dr. Elmer H. Funk, corresponding secretary; Dr. George P. Pilling, treasurer. The sum of $1,000 was pledged toward a fund of $10,000 for the endowment of a hospital room for the free treatment of poor graduates.——The officers of the Alumni Association of the Medico-Chirurgical College elected at the annual business meeting on June 5, are: president, Dr. A. C. Morgan; secretary and treasurer, Dr. W. J. McKinley.

Centenary of the Friends Asylum.—The Friends Asylum for the Insane at Summerdale celebrated its one hundredth anniversary, June 4. Among the speakers were Mayor Blankenburg, who commended the Quakers for opening the institution to all sects, and Dr. Frank Woodbury, secretary of the State Committee on Lunacy, who declared that 34 per cent. of all the cases treated at the institution during the last century have been cured. Out of the 4,421 patients admitted to the asylum since its establishment, 1,502 were completely restored in body and mind, while 503 partially recovered. The asylum property covers more than 350 acres and is part of an original grant by William Penn to a collarmaker in Oxford, England, who deeded it to a Friend in America.

Clinical Society Incorporated.—The Clinical Society of Philadelphia was granted a charter in common pleas court No. 5, May 30. The incorporators are: Drs. E. E. Montgomery, John B. Deaver, Samuel D. Risley, G. Oram Ring, C. J. Decker, George W. Warren, George C. Stout, F. Hurst Maier, E. L. Klopp, H. R. Loux, W. C. Hollopeter and Harvey A. Fenner. The purpose of the society is the establishment of a scientifically constructed and arranged building where lectures and demonstrations are held. It will be built in the neighborhood of Sixteenth and Walnut Streets, and is to be occupied exclusively by physicians, dentists and dealers in medical supplies and appliances. On the top floor club quarters will be provided, including a medical library. The building is to cost about $1,000,000 and the interior will be finished in the most approved hospital construction.

GENERAL

Swindler Arrested.—It is announced in a newspaper of Winslow, Ariz., that James Arthur Baker, whose operations were noted in THE JOURNAL, May 31, p. 1717, was arrested in Kansas City, Mo., escaped from the custody of the sheriff at Flagstaff, Ariz., and was rearrested in Albuquerque, May 26.

Exposition of Safety and Sanitation.—The preliminary notice of the International Exposition of Safety and Sanitation to be held in New York City, December 11-20, under the auspices of the American Museum of Safety, announces the following departments: accident prevention, industrial hygiene, city hygiene, home hygiene, social hygiene, and mutuality.

Officials of Charity and Correction to Meet.—The fourth annual convention of the American Association of Officials of Charity and Correction will be held in Springfield, Ill., June 24-26. The program will be carried out under the following heads: dependent children, insane and mentally defective; administration of institutions; home relief, and correctional problems.

Army Medical School Commencement.—At the annual commencement exercises of the Army Medical School in Washington, the secretary of war presented the diplomas and Dr. Charles W. Richardson, Washington, delivered the address. Brigadier-General George M. Sternberg, U. S. A. retired, presented the Sternberg medal to Lieutenant George N. Calender, an honor graduate, and Colonel John Van R. Hoff, U. S. A., retired, presented the Hoff medal to Lieutenant Benjamin J. Warriner, also an honor graduate.

Bequests and Donations.—The following bequests and donations have been announced:

Mount Sinai General Hospital, Montefiore Home, Home for Aged and Infirm Hebrews, New York Skin and Cancer Hospital, Blythedale Home for Tuberculous Children and the New York Hospital for the Ruptured and Crippled, each $1,000 by bequest of Charles Schoolhouse.

Mount Sinai Hospital and the Montefiore Home, New York City, $25,000 each by the will of Emanuel Heilner.

Jewish Hospital Association, Philadelphia, and Federation of Jewish Charities, each $5,000 by the will of William Kaufmann.

Good Samaritan Dispensary, New York City, $10,000, by the will of Samuel Riker.

Bower Charity Hospital, Boyertown, Pa., $25,000, by the will of Dr. Daniel B. Bower.

Cambridge (Med.) Hospital, donation of $35,000 by an anonymous benefactor.

Seaton Hospital for Consumptives, Society for the Relief of the Destitute Blind, St. Francis, St. Joseph's, and St. Mark's Hospital, New York City, each $6,000 by the will of Theodore Goetze.

Mount Sinai Hospital, Montefiore Home and Beth Israel Hospital, New York City, each $2,000 by the will of Albert Krower.

Montefiore Home, New York City, $5,000 by the will of Sampson Fried.

Montefiore Home, New York City, one-sixth of the residuary estate of Major Ivan Tailof, which will probably amount to more than $8,000.

Confederate Surgeons Elect Officers.—The sixteenth annual reunion of the Association of Surgeons of the Army and Navy of the Confederacy, was held in Chattanooga, May 28, and the following officers were elected: president, Dr. A. A. Lyon, Nashville; vice-presidents, Drs. G. M. Burdett, Lenoir City, Tenn., J. C. Hall, Anguilla, Miss., E. L. Deaderick, Johnson City, Tenn., and Carroll Kendrick, Kendrick, Miss.; secretary-treasurer, Dr. Stephen A. Roagan, Kansas City, Mo. The association selected Jacksonville, Fla., as the next place of meeting.

Alumni Meetings.—At the thirty-eighth annual meeting of the Alumni Association of the Medical Department of the University of Buffalo, May 28, the following officers were elected: president, Dr. Grover W. Wende, Buffalo; vice-presidents, Drs. George E. Brewer, New York City, George W. Goler, Rochester, N. Y., Francis W. McGuire, Buffalo, Cynthia E. W. Koser, Williamsport, Pa., and William Irving Thornton, Buffalo; secretary, Dr. Julius Richter, Buffalo; treasurer, Dr. William F. Jacobs, Buffalo (reelected); trustee, Dr. Henry C. Buswell, Buffalo, and executive committee, Drs. Lesser Kauffmann, Harry Mead and Edith R. Hatch.——The annual meeting and banquet of the Alumni Association of Albany (N. Y.) Medical College was held in Albany, May 27, and the following officers were elected: president, Dr. G. H. Janes, Westfield, Mass.; vice-presidents, Drs. George Walrath, Mariner Harbor, New York City, Thurman A. Hull, Troy, I. M. Stingerland, Fayetteville, John Cotter, Campbell Hall, and S. C. Clemans, Gloversville; recording secretary, Dr. J. Montgomery Mosher, Albany; corresponding secretary, Dr. James M. Vander Veer, Albany, and treasurer, Dr. Robert Babcock, Albany. At the graduation exercises a class of forty-nine received diplomas.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 31, 1913.

The Seventeenth International Congress of Medicine

Some further information may be given with regard to the forthcoming congress. The department of the museum dealing with obstetrics and gynecology will contain specimens illustrating the papers and discussions and also other material, either dealing with the subjects of cancer of the uterus and hemorrhage from the placental site or illustrating other investigations and observations of current interest. An exhibition of old obstetric instruments will be a special feature of this department of the museum. It will contain the whole of the collection now preserved at the Royal College of Surgeons of England, which is being catalogued by Mr. Alban H. G. Doran, and, it is hoped, many other rare old instruments from British and foreign sources.

In connection with the section of laryngology a department has been arranged in the General Pathological Museum to illustrate the following three groups of diseases: (1) neoplasms of the nose, accessory sinuses and nasopharynx (excluding mucous polypus); (2) the rarer forms of laryngeal tumors (including postcricoid carcinoma); (3) diseases of the trachea and bronchi. There will be an exhibition of instruments to illustrate recent improvements in broncho-esophagoscopy, and the committee is prepared to arrange for a limited number of short demonstrations in the museum at stated hours.

Physician Has to Pay Damages for Visiting a Patient Without Her Consent

An unusual case has occurred in which damages were claimed from a medical man for "assault." A woman engaged in domestic service fell down stairs and injured herself. The insurance company in which her employer was a policy-holder sent a physician to examine her. She received no notice of this visit and was asleep in bed when he came. According to the evidence he roughly pushed past her mistress who opened the door, awoke and examined the woman, and tore off a plaster and strap which her own physician had applied, causing much pain. The physician gave a different account. He said that the woman's mistress invited him to the house, and that he removed the plaster at the plaintiff's request. He had made no appointment to visit her; that was a common thing; 75 per cent. of such cases were done under the same terms. In reply to the judge's question, "You suggest that doctors visit patients without first obtaining their consent?" he replied: "It is done in these cases." To this the judge retorted that the defendant had set up a new idea as to the rights of physicians which, from his knowledge of the profession, he thought was a libel on them. Damages of $125 were awarded to the woman.

The National Insurance Act

The insurance committee for London has adopted by a large majority a resolution that it is undesirable that any physician should undertake the treatment of more than 2,000 insured persons. In consequence of the great increase of malingering it has been decided to appoint a medical referee who will examine cases referred to him by the committee. It is complained that medical certificates of inability to work are given much too easily and that in several societies the amount of sickness claims made on the funds greatly exceeds the estimate made by the government actuaries. In some societies the claims by women exceed the estimate by no less than 50 per cent.. and by men by 20 per cent. It has been calculated that if only 1 per cent. of insured persons are malingerers it would cost the approved societies at least $250,000 per week.

Though many of the preliminary difficulties which arose in the inauguration of the national insurance act have been overcome, friction is developing in many ways. A curious situation has arisen in South Wales. In certain areas "medical aid societies" have been formed, which employ whole-time physicians at a salary, importing them into the district Arrangements are made by the societies with the insurance committees to receive the annual sum provided for the medical attendance of the insured persons. These payments are pooled and the physicians are required by the society to attend not only the insured persons but also their families for the capitation fee of $1.50 provided for the former only. Naturally the scheme is opposed by the medical profession. There is no security that an insured person will receive medical benefit of the quality provided by the ordinary panel. The South Wales and Monmouthshire branch of the British Medical Association has passed a resolution protesting against the condition and calling on the staffs of the various hospitals to refuse medical recognition to physicians who accept such appointments.

Another curious situation has arisen in consequence of the refusal of many members of the British Medical Association to follow the order given by the representative body to decline to work the act. In the St. Pancras and Islington Division of London those members who took that course have received a letter informing them that at a meeting of the division it was resolved to take their conduct under consideration; and if it is found in the opinion of the division to be detrimental to the honor of the association, the question of their expulsion will be considered. They are asked to attend a meeting in order that they may put their case before the division.

Increase in the Number of Medical Students

It has been mentioned in a previous letter to THE JOURNAL that in consequence of the apprehensions caused by the insurance act the number of medical students who entered the profession last year declined. It is too soon to make a final estimate of the effect of the act on the profession, but it may be stated with confidence that an exaggerated view of its evils was put forward by those engaged in opposing it. This is borne out by the fact that the number of students commencing the medical curriculum has risen by 165, and now coincides with the average of the preceding five years.

The Population of Ireland

Recent statistics show that the decline of the population of Ireland during the last decade is the lowest on record. There has been a decrease both in the number of emigrants and in the death-rate. Poverty has also decreased. On the other hand, there has been an increase in insanity. The number of insane certified was 14,098 in 1861; it rose to 25,050 in 1901, and to 28,437 in 1911. A similar increase, it may be observed, has been noticed in England, where the social conditions are widely different. How far this increase is only apparent and due to the greater willingness of the relatives to send the insane into asylums, where the conditions of treatment are much improved, has always been a question.

A Color Problem in South Africa

The employment of natives in the Transvaal hospitals has become a serious question. Last year it was discussed at a meeting of representatives of the hospitals. The conference condemned the employment of male natives in white female wards even for cleaning purposes. In consequence male cleaners are being replaced by white or colored women. A second recommendation was that male natives should be nursed by male European orderlies. A few years ago this proposition would have received little support from the profession, but a change of opinion has taken place. One hospital for natives is endeavoring to replace white female nurses by trained native women. In others the European orderly is being introduced at great expense.

The Origin of Life

At the Royal Society of Arts, G. Sims Woodhead, the well-known pathologist, delivered an interesting address entitled "The Origin of Life, and What Do We Know of It?" He agreed with Schäfer, whose views were given in THE JOURNAL, Sept. 21, 1912, p. 953, that it was quite possible that some very low form of life might be created by the chemist. Woodhead held that the development of any living form that we can recognize under the microscope must have involved time almost illimitable, as we reckon it, and our puny and ephemeral experiments would necessarily fail. He believed that some day a great philosopher would rise among us whose outlook would be wide and who could found his philosophy on a broad scientific basis. Until then we are scarcely likely to make any great advance in our knowledge of the origin of life. The biologist will continue to study protoplasm, to place unfertilized eggs in artificial sea water, and he will find evidence of departure from the ordinary processes of development in that these eggs may become fertile. He will dissect embryos and will find that each half will develop into a complete organism. The chemist will go on building up substances indistinguishable from proteins and peptids, substances that hitherto have only been turned out from Nature's crucibles. The physicist will bombard us with electrons and ions, and the astronomer and the geologist will each contribute his mite to the treasury of knowledge. Let us accept any isolated fact that is fully demonstrated, and, when possible, let us fit it into the great scheme of Nature, by the magnitude of which we are overwhelmed, and, therefore but little astonished at the comparatively small part of it that has hitherto been filled in, but of which even the most agnostic must admit the wonderful order and law that rule throughout. "So marvelous and complete is it," concluded Woodhead, "that when I am informed that there is no personal God, I answer to myself that of this great scheme I have but one experience, and that is, that all the will, ruling power and intellect, the soul and spirit of which I have cognizance, are personal; and that if I am to argue from the less to the greater, I must accept it that there is a great Power above all, ruling, guiding and regulating, Personal, but all-pervading, to Whom, in however small a degree, we are allowed to liken ourselves, rebelling against Whose laws we are bound to suffer, directly or indirectly, but obeying with the freedom of sons we become more like that from which we come."

Appalling Increase of Cancer

That cancer has increased in recent years is perhaps a commonplace, but the extent of the increase is not generally realized. Under existing conditions one in seven women and one in eleven men die of cancer. In a pamphlet just issued the Society for the Prevention and Relief of Cancer has given a number of instructive statistics. In the decade 1851-1860 the annual average of deaths from cancer in England and Wales was 6,020. From 1881 to 1890 the average was 16,192; from 1901 to 1910, 30,914. This appalling rise in mortality has been continuous during these sixty years, and it is still going on. Allowing for increases of population, the deaths from cancer are now 5.9 per cent. of the total mortality from all causes. In 1851 the percentage was 1.4. During the thirty years, 1880-1910, the cancer death-rate for the United Kingdom had exactly doubled. Cancer is now overtaking consumption as a cause of death. Fifty years ago for every hundred deaths from consumption there were sixteen from cancer; to-day the percentage is six times as great. With regard to the increase of cancer, Sir Jonathan Hutchinson some years ago made the observation that it was due to improved hygienic conditions, for this enabled persons who otherwise would have died from infectious diseases and other causes to live to the age at which cancer is common. It is noteworthy that the increase is confined to carcinoma; sarcoma is not seriously on the increase.

The Decline of Tuberculosis

A controversy has been going on for some time as to the cause of the decline of tuberculosis. This is not due as sometimes is supposed to the introduction of sanatorium treatment, for even in the period before the discovery of the tubercle bacillus by Koch in 1882 the decline was more rapid than at present. Dr. Newsholme, principal medical officer of the local government board, has advanced the theory that the decline is due to the segregation of large numbers of cases, especially the "open" cases in poor-law and other institutions. A wholly different theory is advanced by Karl Pearson, Dr. Archdall Reid and others based on neo-Darwinian teaching. According to this view, every race is subject to a disease in inverse proportion to its former prevalence because the disease weeds out the susceptible from generation to generation until at length a stock which is immune is produced. This is illustrated by the well-known fatality of a mild disease like measles when introduced to a new population such as the South Sea Islanders. Probably an important cause is the improved hygiene due to an advancing civilization and above all to the improved dietary of the masses of the population, particularly in the epoch following the introduction of free trade into this country, which took place over half a century ago. The effect was greatly to cheapen the necessaries of life. Previously the working man had difficulty in getting even sufficient bread for his family, and a miserable picture has been drawn by writers of that day of the people in our large towns. The period immediately preceding the introduction of free trade was described as "the hungry forties."

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 23, 1913.

Eugenics and Diet

At the last session of the Société française d'eugénique the recent foundation of which I mentioned (The Journal, Jan. 18, 1913, p. 221), M. Fréderic Houssay, professor at the Faculté des Sciences de Paris, read an interesting paper on the influence of diet on heredity. From 1900 to 1907 he kept six generations of hens on an exclusive diet of raw fresh meat. The meat was obtained from animals ordinarily used for food and had no toxic character such as is present in horse-meat or tainted meat. At the very first the change of diet appeared very favorable. In time, however, increasing symptoms of intoxication and of organic fatigue were produced with arthritis deformans, always fatal when allowed to take its course, but cured in many cases by a return to a vegetarian diet. The especially interesting point is that this diet, at first favorable, but in the long run unfavorable to individuals, was still more so to the germs, and consequently to the race. The proportion of eggs which hatched, which was at first 100 per cent., fell to 27, then to 18, and then to 6 per cent. The toxicity of the diet thus manifested itself by preventing the eggs from hatching. Moreover, during the same year a laying hen became more and more intoxicated as her life went on. Accordingly the proportion of incubated eggs which were hatched continued to decrease from month to month, becoming none at all by the end of the season; moreover the chickens which were hatched had less vitality. Failure to reach maturity became more and more frequent and premature deaths became earlier and earlier. At the end of six generations, the race was thus entirely extinct.

On the basis of these experimental facts Houssay asked if habitual laziness and over-feeding has not been the cause of the rapid extinction of many human families. As soon as the human being earns his livelihood he begins to eat too much. The immense majority of civilized persons take too much food. It may be said that the ordinary diet is not perfectly adapted to any one. This is recognized toward the end of the age of maturity. People then select a more restricted diet, thus repairing the ravages previously produced, or preventing them from increasing. This late dietary reform is of no assistance to the race, for ordinarily the disadvantages of the ordinary mode of diet are not recognized until the age of reproduction is passed. Thus from generation to generation each individual begins his own life under less favorable conditions than his forefathers did, and families in easy circumstances finally become extinct, so that in large cities such as Paris, few families are prominent in the city for three generations. The élite of a country is thus constantly becoming extinct as soon as formed, and maintains itself only by constant accessions from the masses of the people, among whom restraint and sobriety are the rule. In short, Houssay believes that he is justified in concluding that the degeneration due to success and good fortune is as destructive as the degeneration due to poverty and should receive just as much attention from a eugenic point of view.

This paper aroused a warm discussion. Dr. Laumonier remarked that the experiments of Houssay confirmed what was maintained a long time ago by Professor E. Maurel of Toulouse, namely, that overfed individuals, whose principal diet was meat, become sterile at the end of three or four generations. Nevertheless, Laumonier feels that results drawn from an exclusive meat diet given to fowls which, although not exclusively granivorous, are less omnivorous than we, cannot justly be applied to men, and that the attempt is being made to draw from them a new argument, not merely against the abuse, but even against the use of meat for food. The arthritis, the degeneration and the sterility which result are caused much more by the excessive quantity of food than by its nature. Unless he has some hereditary taint, a strictly sober person who eats moderately of all kinds of foods never becomes arthritic. In fact, Laumonier has seen arthritis result from the abuse of Combe's diet and of purely vegetable foods. Houssay replied that he had also made some experiments on mammals. Mice fed exclusively on meat died at the end of three months at the outside. The omnivorous mammals adapted themselves much less easily than birds to an exclusive meat diet.

Dr. Weisgerber, subdirector of the Ecole d'anthropologie, objected that the English, who are great meat-eaters, do not appear less fecund than other people. Houssay replied that the English eat underdone meat, which is less toxic. Moreover, they are in the habit of absorbing much alkaline salt with their food. They are also much addicted to athletic exercise.

Dr. B. Roussy called attention to the great fecundity which still, in spite of the slight diminution of the birth-rate, characterizes the German people, who are no more distinguished than the French for their sobriety of diet and who even have the reputation of being in the main great eaters and heavy drinkers. Moreover, in going from Europe to Canada one finds a rich people composed in greater part of true French stock who have kept French customs and among whom, notwithstanding, the birth-rate is very high. Houssay replied that although the Germans are great eaters, ease and plenty were rare in Germany until a few years ago. Since wealth has become more general, the German birth-rate has decreased rapidly. As for Canada, it would be necessary to know exactly what is the ordinary diet of the Canadian provinces. Houssay does not deny the influence of voluntary restriction on the birth-rate. He asks, however, if this restriction does not in itself correspond to a diminution of energy, to a pusillanimity of character which is in close relation with organic modification due to an excessive meat diet.

Dr. Pinard, professor of clinical obstetrics at the Faculté de médecine de Paris, believes that Houssay's experiments are of great importance. He himself has often observed the coincidence of sterility with obesity and gouty heredity. Gouty families ordinarily become extinct through sterility in the third generation. He treated a very obese woman whose father was gouty and who had also no ovulation, by a reduced diet. After having lost 45 kg. (about 100 pounds avoirdupois) she became pregnant and the pregnancy was carried to term.

A New Method of Treating Hydrocele

At the last session of the Société de chirurgie, Dr. Morestin, surgeon of the hospitals of Paris, presented a patient in whom he had cured hydrocele by a new method. After puncture of the tunica vaginalis, which he emptied completely, he injected 2 or 3 c.c. of a one-third dilution of liquor formaldehydi. A considerable inflammatory reaction resulted. White edema was produced in the scrotum and prepuce but the patient suffered little. This process gives excellent results. The patient in question was operated on three years ago and the hydrocele has not recurred.

Damages of $400 Imposed on the Paris Medical School

I mentioned in a previous letter (The Journal, May 31, 1913, p. 1720) the little epidemic of typhoid fever caused by the fact that in the interior of the Faculté de médecine conduits of river water had been put into communication with conduits of spring water. Before these waters could be mixed it was necessary that the special seals placed on two conduits of river water by the municipal service should be broken. An order of the prefect of the Seine, Sept. 22, 1891, forbade the school to break these guarantee seals under penalty of 1,000 francs ($200) for each broken seal. The school has therefore been fined the amount specified.

The Use of Emetin in Abscess of Liver, in Dysentery and in Syphilis

I mentioned in a previous letter the success which Chauffard obtained by use of emetin in a case of dysenteric abscess of the liver opening into the bronchi (The Journal, March 22, 1913, p. 917). Since then Chauffard has reported to the Société médicale des hôpitaux de Paris another case of the same kind. The patient was a man of 40 who had never lived in the colonies, had never had any dysentery and who entered the hospital for a large abscess of the liver. A thoracotomy was done, giving access to a pus pocket which was incised and drained after evacuation of more than 1 liter (1 quart) of chocolate-colored pus. This pus was sterile on smears and culture, but histologic examination of a fragment of the wall of the abscess showed the presence of numerous amebas. After the operation the fever and the chills disappeared, but the drain left in the wound continued to discharge a large amount of hemorrhagic pus. A subcutaneous injection of 0.04 gm. of emetin hydrochlorid was then employed. The next day 0.08 gm. of the same drug was injected directly into the cavity of the abscess. On each of the two following days 0.04 gm. of emetin was subcutaneously injected. These injections provoked no local or general reaction, and were immediately followed by the disappearance of the secretion of pus and by the recovery of the patient.

Dr. Rouget likewise suppressed the secretion of a chronic and amebic abscess of the liver by a subcutaneous injection of emetin. Dr. Flandin reported to the society the case of a woman who had contracted amebic dysentery in Madagascar, and presented some time later an abscess of the liver which opened into the bronchi and necessitated an operation. Each day a large quantity of pus continued to issue, but after subcutaneous injections of emetin hydrochlorid in doses of 0.08 gm. per day, all the complications disappeared. Treatment by emetin, therefore, seems to complement surgery in large amebic abscesses of the liver.

Dr. Dopter observed a patient with very serious amebic dysentery which had resisted all habitual means of treatment and which was completely cured by three injections of emetin hydrochlorid, the first dose 0.02 gm., the other two in doses of 0.04 gm. each.

The particularly interesting point is the good results which the same medicine has given in cases of syphilis. Dr. Milian a year ago treated a physician of the colonial troops who had been affected with syphilis and with amebic dysentery at the same time. He gave the patient four injections of 0.04 gm. each of salvarsan. Two days after the first injection the dysentery ceased completely. This efficacy of salvarsan against amebic dysentery made Milian suppose that treatment for dysentery might likewise be efficacious against syphilis. To verify this hypothesis he prescribed for a patient with an obstinate headache and syphilitic episcleritis, four intramuscular injections of 0.01 gm. of emetin. The headache and episcleritis disappeared in forty-eight hours. In a tabetic who had tibial periostoses and recurrences in spite of mercury and salvarsan, emetin cured these recurrences in forty-eight hours. The drug, however, was less efficacious against syphilitic manifestations which had not already been modified by a specific treatment.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, May 9, 1913.

Personal

Professor Westenhöffer, former assistant of Virchow, has been appointed assistant at the Berlin institute of pathology as successor of Professor Kayserling, who was called to Königsberg.

Having resigned his position as privat-docent, Professor Dührssen has severed his connection with the medical faculty.

Professor Stieda has been appointed temporary director of the surgical clinic at Halle, as successor of Professor von Bramann, deceased.

The new building of the first medical clinic of the Charité in Berlin was dedicated May 5. On the first floor of the central building is located the library of the clinic, containing about 10,000 volumes; the basis of this collection is formed by the library founded by Professor von Leyden, the former director of the clinic.

Von Behring's Method of Vaccination Against Diphtheria

As I said in my last letter, von Behring gives in the current issue of the *Deutsche medizinische Wochenschrift* a detailed report on his new prophylactic against diphtheria. The remedy is a mixture of very strong diphtheria toxin and antitoxin combined in such a proportion that the mixture shows only a slight, if any, surplus of the toxin when tested on guinea-pigs. Von Behring has previously reported a method of immunizing by a combination of toxin and antitoxin, and this was used at many places. The present method, which he regards as completely new, is a result of experiments on all available species of animals which showed that it is impossible to produce in a test-tube complete neutralization of the diphtheria toxin. The biologic laws which have so far been thoroughly investigated only in animal experiments seem to apply also to man. Von Behring presented evidence to prove the necessity of a method of prophylaxis more efficient than diphtheria antitoxin. The statistics show, for instance, that in Berlin alone the number of diphtheria cases has increased from 2,997 in 1906 to 11,578 in 1911, and it is apparently still increasing; further, it is known that for more or less justified reasons prophylactic injections are not generally used; finally, it is evident that all sanitary measures ordered by the police authorities for the suppression of diphtheria, such as closing of schools, disinfection of houses and persons, isolation of patients, convalescents and bacillus-carriers, have so far had barely noticeable, by no means brilliant, success, notwithstanding the extensive medical and other aids invoked and the burden which they impose on the affected families. From these and similar facts it is easily understood why von Behring is endeavoring with all his energy to introduce his method of vaccination for prophylaxis of human beings. He states that the remedy will not be given out generally except under stringent conditions for making thorough tests of it. Consequently he will first supply his remedy only to institutions which have medical attendants trained in such work and where there are proper arrangements for experiments on guinea-pigs to test its aseptic character and lack of toxicity. In addition to all this, a physician with experience in examination of the blood for antitoxin content must also be available. Each person to be treated must be examined beforehand, not only for his antitoxin index, but also to learn whether or not he is a bacilli carrier; if so, it is to be determined through continuous observation if the treatment will cause the bacilli to disappear. Periodical examinations of the blood must be made then according to a given method, so that the course of the production of antitoxin and the disappearance of toxin may be determined with sufficient accuracy after the immunizing treatment has been given. Further, a very careful record must be kept and duplicates of these records must be sent regularly to the Marburg institute; other precautions, besides, must be taken. In the meantime the most important thing is not the number of cases treated, but the accurate investigation of the conditions in each individual case, on which depend the production of antitoxin and thus the success of the immunization, the promptness of its appearance and its duration. (See Abstract 45 in The Journal, June 7, p. 1839.)

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, May 26, 1913.

Scholarships for Medical Students Entering the Army

The old complaint of insufficient numbers of the army medical corps is now more justified than ever before, and the actual unsatisfactory conditions are felt very keenly. The political crisis of the last half year has caused about 400,000 men to be called in for active service and the ratio of doctors to soldiers went down as low as 1:3,000, or even lower. At the same time the amount of sanitary work to be done (inspection of sanitary precautions, and small outbreaks of epidemics), was much more than ever before. The organization committee has now taken a further step in order to secure an adequate number of doctors for army purposes. A number of scholarships have been granted to students of medicine willing to take up a military career. Applicants for these scholarships have to pass an examination by a staff surgeon to prove their bodily ability. Then they will receive a yearly sum of 480 kronen ($120) until they have passed the first *Rigorosum* or severe examination (generally taken in the fifth semester). After that time they are entitled to a yearly sum of 720 kronen ($180) until they have passed the second *Rigorosum*. This must be taken in the tenth semester. Then they receive yearly

1,080 kronen ($270) until they are called for the final examination and take their degree as M.D. They have to serve, besides the three years which they are bound to stay with the army apart from the scholarship conditions, another four years. On entering the army they receive 6,000 kronen ($1,200) as repayment of the expenditure of their medical studies. It is also promised that within the next five years the conditions of promotion will be improved in such a way that military surgeons will reach after twenty-five years of service the rank of general staff surgeon, thus removing one of the chief reasons for the avoidance of the army by doctors. Also the conditions of old age or superannuation pensions will be shortly brought to a modern level, and the pension of a regimental surgeon will be increased in a liberal degree so as to induce many doctors to serve at least over their term until they reach this rank. If religious prejudices are done away with also, the desired effect will be obtained in a few years, but the last condition is the most difficult one in this country.

Sexual Diseases Among University Students and Upper Classmen of High Schools

The Austrian Society for the Fight against Sexual Diseases has conducted during the last few years an investigation into the prevalence of sexual diseases among different classes of the population, and one of the most startling facts brought into light was the frequent occurrence of this kind of illness among the adolescents of the "better" or wealthier classes. Thus among the students enrolled in the universities and allied high schools, no less than 25 per cent. were affected or rather infected, while even among the pupils of our gymnasiums and equivalent schools (attended by students from 16 to 19 or 20 years of age), 11 per cent. were infected, mostly with gonorrhea. This alone would give a forcible plea for the necessity of sexual hygienic instruction of students aged about 16, for in the overwhelming majority of the cases, the diseases had been contracted by sheer lack of knowledge of the risk encountered. The unwonted liberty offered to the hitherto closely watched pupil when he comes to large cities for university studies and has to live not in a school, but in a private house, is most dangerous in this respect. The society has already succeeded in inducing the reluctant authorities of the universities to have a printed warning handed over to every student matriculating in the institute. In this leaflet the importance of early and energetic treatment of all kinds of sexual diseases, and the necessity of putting away all shame in this respect, are clearly pointed out, and earnest advice is given to abstain from all sexual intercourse before marriage, this being the only safe way for remaining healthy and vigorous. Lately, by permission of the government, a dispensary for diseased students has been organized and the two dermatologic clinics of the Vienna University will alternate in this service.

The Problem of Euthanasia

The newspapers in this country are discussing now the problem of euthanasia, or the right of an individual to demand from his medical advisers active help to pass away from this world. The discussion was opened by a medical man, who himself was the victim of an incurable disease, and who proposed a regular act of parliament for this purpose. He worked his suggestion out in the following way: "Every person suffering from an incurable disease should be entitled to get euthanasia (help for dying). He should be obliged to apply for this purpose to the nearest court of justice. The court should order an examination of the patient by its forensic doctor, together with two competent specialists. If desired, other doctors may take part in the examination. This examination should take place not later than a week after the application has been tendered. If the examiners agree that the fatal outcome of the illness is much more to be expected than a cure, according to their scientific conviction, the patient should be helped to die. Whoever kills a patient or helps him to die painlessly, acting on the patient's express wish, and by permission of a court, would remain free from punishment. If the post-mortem examination shows that the disease was incurably fatal, he may also remain free from punishment. Killing a patient without his expressed and clearly manifested wish will be regarded as murder. Crippled or maimed persons should be considered in the same way as fatally ill persons." The resulting discussion is most significant for the difference of opinions. While the general public is not opposed to this idea, protests from medical quarters are very vehement and frequent. One of the most convincing opponents points out that medical knowledge is not yet advanced far enough to allow a sweeping statement as regards curability or fatality. It is too well known how patients with sarcoma, carcinoma, tuberculosis, neuralgia and the like suddenly improve and even become cured, in spite of the sentence of death passed on the patient by the medical adviser. On the other hand, medical art has enough means at hand to prevent sufferings to such patients. This kind of euthanasia is already being practiced widely enough, and it requires no law, while the before-mentioned "help to die" would always lead to the possibility of conscious or unconscious murder. The fear of death must not be confused with the right of dying. As regards the trend of thought of our juristic and political authorities, there is very little probability of this suggestion becoming law within a short time.

Marriages

Thomas Raymond Beggs, M.D., Dallas, Tex., to Miss Muriel Hillard Sonne of New York City, at Trudeau, N. Y., May 18.

Gustav Sjolander, M.D., Midland, Mich., to Miss Lydia E. Wade of Kansas City, Mo., at Midland, Mich., May 16.

Frederick Blunt Allen, M.D., North Wales, Pa., to Miss Florence Corbin Newbold of Ridgefield, N. J., June 4.

Thomas Harkins Ingram, M.D., Marianna, Ark., to Miss Josephine Le Master of Memphis, Tenn., June 11.

Louis J. Linder, M.D., East St. Louis, Ill., to Miss Helen L. Bott of Brighton, Ill., at Alton, Ill., June 4.

William Lord Smith, M.D., to Mrs. Edith De Mauriac, both of Boston, at Grafton, Mass., May 31.

Clarence Edgerton Owens, M.D., to Miss Clara Ellen Forbes, both of Columbia, S. C., May 20.

Rene Hector Hurvelle, M.D., to Miss L. Elizabeth Featherstone, both of New York City, May 22.

Edgerton Lafayette Crispin, M.D., to Miss Angela Shipman, both of Ocean Park, Cal., May 27.

David Swan Linvill, M.D., Columbia City, Mo., to Miss Emma Erdmann of Chicago, May 21.

William Kerwin, M.D., to Miss Myre Stromberg, both of St. Louis, at Arcadia, Mo., June 1.

James Garcia, M.D., Idalia, Colo., to Miss Ethel Belle Manley of Tuttle, Colo., May 19.

William Cleveland Myers, M.D., to Miss Julia Collier, both of Dana, Ind., about May 14.

Harry Viley Johnson, M.D., to Miss Maria Payne Rucker, both of Georgetown, Ky., May 28.

T. Arthur Johnson, M.D., to Miss Ruth Winnifred Swanson, both of DeKalb, Ill., May 28.

John Chester Carmer, M.D., to Miss Mary E. Townsend, both of New York City, June 4.

Francis Marion Schilling, M.D., to Miss Lydia Lever, both of Philadelphia, June 4.

Lewis Harlan Athon, M.D., to Miss Cleone Groat, both of Los Angeles, June 12.

Harry Press, M.D., to Miss Mollie Fineblit, both of Manchester, N. H., May 25.

Jacob Luftig, M.D., to Miss Friedberg, both of Boston, March 23.

Deaths

Harry A. Tomlinson, M.D. University of Pennsylvania, Philadelphia, 1880; one of the most prominent alienists of the Northwest; died at his home in Willmar, Minn., May 30, from cerebral hemorrhage, aged 57. Before coming to Minnesota, Dr. Tomlinson had had charge of a private hospital for the treatment of inebriates in Frankford, Pa. He became a member of the staff for the State Hospital for the Insane at Saint Peter in 1891 and was made its superintendent two years later, and continued in that position until the establishment of the State Hospital for Inebriates, Willmar, of which he was superintendent from its organization until the time of his death. He was a member of the American Medical Association, the American Neurological Association, American Medico-Psychological Association and American Academy of Medicine, and was one time president of the National Association of Asylum Superintendents. He had made many contributions to the literature regarding the pathology of insanity and the treatment of the insane, and was an alienist of national reputation.

John Pitman, M.D. Washington University, St. Louis, 1864; a member of the American Medical Association; vice-president and one of the founders of the Bank of Kirkwood, Mo.; for twenty-eight years president of the Board of Education and for several years a member of the Kirkwood town board; local surgeon of the Missouri Pacific System; died in St. Luke's Hospital, St. Louis, May 28, from peritonitis, following an operation for appendicitis, aged 75.

Benjamin Franklin Barnes, M.D. University of Wooster, Cleveland, Ohio, 1895; a member of the American Medical Association; formerly president of the Licking County (Ohio) Medical Society; local surgeon of the Baltimore and Ohio System at Newark, Ohio, and a member of the Association of Baltimore and Ohio Railway Surgeons; died in Lakeside Hospital, Cleveland, May 28, four days after an operation for the removal of gallstones, aged 47.

John Richard Francis, M.D. University of Michigan, Ann Arbor, 1878; formerly chief surgeon of the Freedmen's Hospital, Washington, D. C.; at one time a member of the Board of Education of Washington, of the board of trustees of Howard University and of the executive staff of Freedmen's Hospital; one of the most prominent and wealthy colored physicians of Washington; died at his home, May 23, aged 57.

J. Boyd Risk, M.D. University of Pennsylvania, Philadelphia, 1879; a member of the American Medical Association; mayor of Summit, N. J., from 1908 to 1912; vice-president of the Summit Trust Company and a director of the First National Bank; died at his home, May 31, from a nervous disorder, aged 56.

Elmer Ellsworth Brown, M.D. Jefferson Medical College, 1897; a member of the Medical Society of the State of Pennsylvania; vice-president of Temple University and prominent in business circles in Philadelphia; a director of the Samaritan and Garretson hospitals; died at his home, May 23, aged 52.

Orson Wilson Tock, M.D. University of Michigan, Ann Arbor, 1870; a veteran of the Civil War and prisoner in Andersonville; for more than forty years a practitioner of Genesee County, Mich.; died at his home in Flushing, May 20, from heart disease, aged 70.

John Tyler Harrison, M.D. Barnes Medical College, St. Louis, 1897; of San Antonio; a member of the American Medical Association and a widely-known practitioner of San Antonio; died at the Wyeth Hospital in that city, May 25, a few days after an operation, aged 47.

James Alexis Post, M.D. University of Michigan, Ann Arbor, 1866; for twenty-five years general secretary of the Associated Charities of Detroit, Mich.; a surgeon of volunteers during the Civil War; died in a sanatorium in Los Angeles, March 13, aged 75.

Edward Fletcher Brooks, M.D. New York University, New York City, 1894; of Newburgh, N. Y.; while crossing the Erie Railroad tracks in his automobile, May 13, was struck by a train and received injuries from which he died a short time later.

Matthew John Leland, M.D. New York University, New York City, 1883; for many years professor of science and languages in Roman Catholic colleges in New York and Brooklyn; died at his home in Brooklyn, May 29.

George Payne Holman, M.D. College of Physicians and Surgeons, New York City, 1873; for forty years a practitioner of San Saba, Tex.; died in his apartments in Galveston, May 25, from heart disease. aged 65.

Shelly C. Moore, M.D. Hospital Medical College, Eclectic, who was shot by a Atlanta, Ga., 1911; of Luray, S. C.; negro desperado, April 30, died from his wounds in a hospital in Columbia, S. C., May 5, aged 24.

William Andrew Shuey, M.D. University of Virginia, Charlottesville, 1873; a member of the West Virginia State Medical Association and a Confederate veteran; died at his home in Piedmont, May 17, aged 77.

Milton Colt Belknap, M.D. Eclectic Medical College of the died City of New York, 1868; a veteran of the Civil War; at his home in Mayville, N. Y., May 22, aged 70.

Lewis Shepard, M.D. Miami Medical College, Cincinnati, died at his home near 1868; formerly of Newport, Ind.; Quaker, Ind., recently.

Eugene Frederick Hoyt, M.D. Hahnemann Medical College, Philadelphia, 1870; a specialist on diseases of the ear and throat, of New York City; died at the home of his daughter in Newark, N. J., May 26, from nephritis, aged 66.

James Clyde Snively, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1891; a member of the Washington County Board of Health; died at his home in Fruitdale, Ala., April 20, from uremia, aged 48.

Harry James Relihan, M.D. Northwestern University Medical School, Chicago, 1909; formerly of Sanborn, Iowa; died at his home in Chicago, May 31, from the effects of an overdose of morphin, aged 31.

Frank William Thompson, M.D. Yale University, New Haven, Conn., 1907; assistant surgeon, U. S. Navy; died at the U. S. Naval Hospital, Newport, R. I., May 30, from pneumonia, aged 29.

Daniel Richards, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1865; for nearly half a century a practitioner of Marion, N. Y.; died in Palmyra, N. Y., May 21, aged 80.

William E. Cooper, M.D. Medical College of Indiana, Indianapolis, 1894; of Sheridan, Ind.; died at his home, about May 23, after an operation for the removal of a tumor, aged 60.

Morris Drossner, M.D. University of Greifswald, Germany, 1863; a specialist on diseases of the eye, ear and throat, of Jersey City, N. J.; died at his home May 25, aged 70.

Henry Clay Coley, M.D. Cooper Medical College, San Francisco, 1878; formerly of Stonyford and Chico, Cal.; died suddenly at Terra Buena, Cal., about April 25, aged 61.

James M. Grimes, M.D. Missouri Medical College, St. Louis, 1857; a member of the Illinois State Medical Society; died at his home in Camp Point, May 21, aged 77.

August John Freutel, M.D. Albany (N. Y.) Medical College, 1902; a member of the American Medical Association; died at his home in New York City, April 28, aged 36.

Emma J. Cornwall, M.D. Hahnemann Medical College, Chicago, 1884; died at the home of her daughter in Denison, Iowa, April 20, from senile debility, aged 75.

Patrick J. Gallagher, M.D. Georgetown University, Washington, D. C., 1891; died at his home in Washington, D. C., March 28, from cerebral hemorrhage, aged 55.

John W. Shockey, M.D. Physio-Medical Institute, Cincinnati, 1874; of Columbus, Ohio; died at the home of his daughter in that city, May 26, aged 66.

Winfield S. Jarvis, M.D. Kentucky University, Louisville, 1903; of Olive Hill, Ky.; was found dead near that place, May 22, from exposure, aged 36.

W. Wilroy Catching, M.D. Tulane University, New Orleans, 1901; died at his home in Georgetown, Miss., about May 7, from pneumonia, aged 37.

John DeWitt Nelson, M.D. College of Physicians and Surgeons, New York City, 1875; died at his home in New York City, May 21, aged 64.

R. W. Patterson, M.D. Northwestern University Medical School, 1902; died at his home in Menahga, Minn., May 11, from uremia, aged 38.

Henry Maclean Crawford, M D. College of Physicians and Surgeons, New York City, 1896; died at his home in New York City, May 7.

William H. Boyd, M.D. Atlanta (Ga.) Medical College, 1869; died at his home in Rome, Ga,, May 8, from senile debility, aged 85.

Samuel B. Baker, M.D. University of Buffalo, N. Y., 1899; died at his home in Rochester, N. Y., May 27, from heart disease, aged 43.

James E. Payne, M.D. Barnes Medical College, St. Louis, 1901, of Normangee, Tex.; died recently in a sanatorium in Houston, Tex.

Carl Goff Morse, M.D. Tufts Medical School, Boston, 1910; of Winthrop, Mass.; died in a hospital in Boston, April 3, aged 36.

Joseph Warren Dorset, M.D. University of Alabama, Mobile, 1903; of Wilmer, Ala.; died in a hospital in Mobile, May 9.

George L. Harbour, M.D. Louisville (Ky.) Medical College, 1893; of Vosburg, Miss.; died at his home, May 23, aged 43.

William R. Denbo, (license, Indiana, 1897); died at his home in Mauckport, April 21, aged 59.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

CLEAN ADVERTISING

A Layman's Criticism of Some Resolutions

The public is waking up to the evils of fraudulent medical advertising. Those interested in the advertising business know this, for men of no other class keep closer watch on the pulse of public opinion. The letters on the subject of fraud in medicine received daily by THE JOURNAL from laymen further emphasize the amount of public interest in this question. Physicians deserve credit for having instituted this fight against an insidious form of fraud—a fight that should have emanated from the public rather than from the profession. For years, the doctors of the country have tried to awaken the public mind to the menace of fraudulent "patent medicines" and irregular medical practice. Any apparently reactionary step taken, even inadvertently, by physicians in matters of this kind is most unfortunate. The following letter from Mr. E. J. Lee Rust of Birmingham, Ala., deserves a careful reading:

To the Editor:—To some of us poor ignorant people, who are not members of the grand and glorious medical profession, it would appear as though the various state medical associations—and in this case I refer especially to the Alabama Medical Association—did not give us credit for being able to think at all.

About a week ago the Birmingham *Ledger*, a daily paper, had an article on its front page under the following heading:

FORMAL PRESENTATION OF PHYSICIANS' ENDORSEMENT
LEDGER'S CLEAN COLUMNS

> The resolutions adopted by the Medical Association of the State of Alabama, at the recent convention in Mobile, commending the Birmingham *Ledger* for its steadfast refusal to open its advertising columns to medical quacks, has been transmitted to the *Ledger* by Dr. L. G. Woodson, chairman of the committee delegated by the state organization to perform this act. The resolutions, which have gone on record in the minutes of the state association, read as follows:
>
> "*Resolved*, That the Medical Association of the State of Alabama hereby places itself on record as giving unqualified endorsement to the policy adopted by the Birmingham *Ledger* in refusing to receive for insertion in its columns advertisements of quacks and all such misleading and fraudulent matter.
>
> "*Second.* Be it further resolved, that this association hereby commends in the highest degree the policy of the Birmingham *Ledger* in refusing to insert advertisements of the kind mentioned above in its columns.
>
> "The board heartily endorses the above resolutions and recommends that they be adopted by the association *cum laude*, and expresses the hope that other leading and influential journals of the state will follow the example thus set by the Birmingham *Ledger*.
>
> "The board further recommends that a special committee of three, to be composed of Drs. Woodson, Ward and Dowman of Birmingham, be appointed to transmit in person to the proprietors of the *Ledger* a copy of this action of the association.
>
> "Attest: W. H. SANDERS, M.D., State Health Officer."

The preceding refers to the fact that the *Ledger* has, for some time past, refused to accept the advertisements of certain doctors, especially those who advertise to cure the so-called private diseases of men and women. After reading the above article in the *Ledger* I glanced over its columns and, in the same issue with the above "boost" by the state medical association, I found and cut out advertisements of the following:

Beecham's Pills
Digestit
Croxone
Dr. Dodson's Liver Tonic
Carswell's Liver-Ade
Chamberlain's Cough Remedy
Mother's Friend
Wonderful Zemo
Mayr's Wonderful Stomach Remedy
Frontier Asthma Co.
Parisian Sage
Othine (Cures Freckles)
Ayer's Hair Vigor
Union Painless Dentists
Gets-It
Mercolized Wax
Tutt's Pills
Teethina
Lydia E. Pinkham's Vegetable Compound
Valdona Health Guide
Danderine
Dr. Caldwell's Syrup Pepsin
Hot Springs Liver Buttons
Home Receipt for Gray Hair
Nadinola Cream
Fulton's Diabetic Compound
Mrs. Winslow's Soothing Syrup
Abbot Bros. Rheumatic Remedy
Resinol
Foley's Honey and Tar
Calocide Compound
Wyeth's Sage and Sulphur Hair Remedy
Syrup of Figs
Hostetter's Stomach Bitters
Swamp Root
Carter's Little Liver Pills
Cuticura Remedies for Eczema
Wine of Cardui
S. S. S.

I will say here, as I want to be accurate, that not all of the preceding were cut out of the issue mentioned, as, after I started the list I picked up to-day's paper and found some advertisements not in the former paper.

Here is a great medical association praising a paper because it will not publish the advertisements of certain doubtful doctors, and it goes right ahead, with a notice on the front page telling innocent people to buy whatever is published in the *Ledger*, and advises you to patronize our old friend Lydia E. Pinkham, Wine of Cardui, Union Painless Dentists, etc. Now, as a layman who is interested in all clean cures for existing evils, medical, social or political, I would like to have the opinion of THE JOURNAL of the American Medical Association on the foregoing glowing tribute to the Birmingham *Ledger*.

Mr. Rust's criticism is a just one. It is quite evident that the Birmingham *Ledger* does not refuse to receive for insertion "misleading and fraudulent matter." A newspaper that carries advertisements of a fraudulent "consumption cure," such as Eckman's Alterative, a dangerous "headache cure" such as Antikamnia, a "baby-killer" like Winslow's Soothing Syrup, a caustic poison like Mercolized Wax, a worthless "rupture cure" like Stuart's Plapao Pads and general all-around frauds like Kilmer's Swamp Root, Doan's Kidney Pills and Mayr's Stomach Remedy—and all of these appear in the *Ledger*—is hardly in a position to be praised for its clean advertising.

In view of these facts, the matter given above was submitted to Dr. W. H. Sanders, State Health Officer of Alabama, who replied:

"*To the Editor:*—Your letter of recent date, accompanied by a galley proof of matter you propose to insert in THE JOURNAL, has just been received. I am greatly obliged for the opportunity you have just afforded me of explaining the awkward position in which our State Medical Association seems to have involved itself. The resolutions of endorsement of the Birmingham *Ledger* were introduced by a member from Birmingham, and, taking it for granted that the resolutions embodied facts, the association endorsed them. The communication of your correspondent from Birmingham seems to show that the *Ledger* was not entitled to the high endorsement which it received from the association. I regret very much that the association accepted without investigation the resolutions as expressing facts. Should it turn out after thorough investigation that the association was misled in this matter I can assure you that it will on the earliest opportunity correct its mistake, which was inadvertent and not intentional. Should the matter which you submit appear in THE JOURNAL I hope you will insert this communication along with it."

RESPIRAZONE

"Can you tell me the composition of Respirazone, Tilden?" asks Dr. A. F. Barnes of Cambridge, Mass. No, we cannot. The company that manufactures it publishes an incomplete and therefore meaningless "formula." The stuff is said to be composed of: "Iodid and Bromid of Potassium, Helianthus Annuus [Sunflower], Ipecacuanha, Lobelia Inflata [Lobelia] and Leonurus Cardiaca [Motherwort]." Taken even at its face value, Respirazone is evidently a nostrum of the shotgun prescription type, containing, as is so often the case, some obsolete and worthless drugs. Our readers may remember a report of the Chemical Laboratory of the Association appearing in THE JOURNAL, June 19, 1909, p. 2008, on the Tilden Company's Hydrocyanate of Iron. There it was shown that the product was a mixture of Prussian blue and talc, and the investigation indicated that the firm was not inclined to disclose the composition of its remedies to the medical profession. A note on another of the company's products—Febrisol—which appeared in THE JOURNAL, June 29, 1912, p. 2043, called attention to the fact that the Tilden Company had been found guilty under the Food and Drugs Act of misbranding its product.

The time has come when physicians are thinking on this subject of scientific prescribing. They are glad to cooperate with firms which deal fairly, but they are unwilling to act as promoters of shotgun and other nostrums. The day is coming slowly but surely when the practitioner will not be cajoled into prescribing mixtures unless there is a real scientific reason for each part in the combination.

THE "KNOWN DOCTORS"

Imitators of the "United Doctors" Come to Grief at Ottumwa, Iowa*

The "Known Doctors," imitators of the methods of the "United Doctors," with offices at Ottumwa and Oskaloosa, Iowa, and Hastings, Neb., appear to have come to grief after a brief career. B. J. Chenoski, the promoter, according to press reports, recently pleaded guilty in the United States Court at Des Moines to using the United States mails to defraud, and sentence was deferred until the next term of court. James Ezra Meyers, one of Chenoski's hired "specialists," we are informed, was bound over to court for obtaining money under false pretenses, and is now under $500 bail.

The Known Doctors opened an office at Oskaloosa in October, 1912. The preliminary advertising campaign in Iowa was conducted under the name of the "United Doctors" but it was changed to "Known Doctors" just before the office was opened. Later the offices at Ottumwa and Hastings were opened. The advertising was almost an exact copy of that used by the United Doctors.

After a career of seven weeks, the office at Hastings was closed and Dr. H. C. Williams, formerly of Omaha, who was in the employ of Chenoski, was left to hold the sack. Chenoski abandoned the office and, according to the Hastings *Daily Republican*, left rent and other unpaid bills.

B. J. Chenoski, the promoter of the concern, is not a physician, but claims to be a chiropractor. At one time he was a pharmacist in one of the department stores in Chicago. Later he became manager of the "Chicago Men Specialist Company" at their branch office at Des Moines. His peculiar methods while manager of this company are said to have brought about his discharge. He then became the promoter of the Known Doctors. About May 20, 1913, he was arrested by the post-office authorities for fraudulent use of the mails in connection with his medical business. According to the Ottumwa *Courier*, May 20, 1913, a bottle of tea was sent as a specimen of urine to Chenoski by a pretended patient who was in the employ of the government; and after an alleged examination of the specimen, a letter giving a diagnosis of diabetes was sent through the mail. On this he was arrested and when arraigned before Judge Smith McPherson in the Federal Court at Des Moines he pleaded guilty.

James Ezra Meyers was the "consulting physician" of the Known Doctors at Ottumwa. In the latter part of April he, with B. J. Chenoski, was arrested for obtaining money by false pretenses on the complaint of an aged patient, with cancer of the stomach, whom it is alleged they agreed to cure for $225, of which $175 was paid in cash and a receipt given. The cure was guaranteed and the balance of $50 was to be paid when the cure had been effected. The diagnosis of cancer was made by the physician who had previously attended the patient and was confirmed by others. The disease continued to advance, and, as already stated, the parties were arrested. Dr. Meyers, after a hearing before a justice of the peace, was bound over to the grand jury as stated. He graduated at the Illinois Medical College in 1910 and formerly practiced at Lansing, Iowa.

At Oskaloosa Dr. Theodore Milen seems to have been in charge of the office. Milen has been in the quack advertising business for many years. Like Ben W. Kinsey of the United Doctors he was a pupil and employee of "Phenomenal Kraus" when the latter invaded Des Moines, Iowa. In 1906 Milen was "physician-in-chief" of the Hot Springs Doctors at Sioux City, Iowa, and in 1909 he was associated with Dr. C. C. Aitken under the name of "Austro-American Doctors," with offices also in Sioux City. At that time charges were filed against him by the State Board of Health on account of fraudulent representation as to skill and ability, and gross unprofessional conduct. He left the state without appearing before the board and the charges became outlawed. He entered the employ of the Des Moines Specialists Company in 1912 and later became associated with Chenoski at Oskaloosa.

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* For previous articles on this form of quackery see Propaganda Department, The Journal A. M. A., March 1 and June 7, 1913.

Correspondence

Lateral Incisions in the Treatment of Felons: A Warning

To the Editor:—In The Journal, May 10, 1913, p. 1416, is an interesting article by Dr. G. M. Dorrance on the treatment of felons by a coronal incision which separates the pulp of the finger from the subjacent bone. The free drainage afforded and the absence of any scar on the tactile area commend themselves.

In a personal experience with a felon nine years ago the advantage of a lateral incision appealed to me, and under my direction an incision was made precisely similar to that advocated by Dorrance except that only a lateral half of the flap was raised. The operation was entirely satisfactory so far as it provided drainage and relieved pain, but an annoying loss of epicritic perception, which evidently is permanent, daily warns me of the disadvantages of the incision. Although the incision was made well to the side, the tactile area anterior to the scar and also a narrow area posterior to the scar retain this unpleasant anesthesia and paresthesia; which interfere to some degree with finer tactile perception.

The division of sensory nerves, therefore, is an important objection to lateral incisions of the fingers. There is also an increased risk of wounding the digital arteries; but this, as a rule, is less serious than the permanent interference with tactile perception. It is urged, therefore, that the time-honored medial incision is the best incision for all deep suppurations involving the plantar surfaces of the fingers.

The mistakes usually made are that the incision is made too short, too late and too superficial. As these infections often involve the tendon sheaths and may involve the entire finger, the median incision has also the advantage of affording free drainage even though the infection involve more than the terminal phalanx. Although the incision be 2 or 3 inches in length, the resultant scar or deformity is usually slight and no sensory impairment remains. No general anesthesia is necessary, as complete anesthesia of the finger may be obtained by the deep injection of a few drops of a weak cocain or novocain solution in the anterolateral area at the base of the finger so as effectually to block the two digital nerves. A constricting band is desirable. The importance of rest in bed, elevation of the part, and ample wet drainage need not be emphasized.

The prophylaxis of digital infections, especially for physicians, has not been sufficiently appreciated. Rubber gloves should be used for vaginal examinations, dressings and postmortems. With the premonitory signs, usually a slight stinging or itching sensation in the area of infection, the part should be protected from irritation or bruising, and coated with the official yellow oxid of mercury ointment. Several of the mercurial ointments are remarkably efficient in preventing or aborting cutaneous infections.

W. Wayne Babcock, M.D., *Philadelphia.*

Bone-Grafting without Periosteum

To the Editor:—In The Journal, May 17, 1913, p. 1533, Dr. H. G. Wetherill of Denver reports a successful case of bone-grafting without periosteum.

In a report of our experimental bone and periosteal transplanting at the Texas State Medical Association the early part of this month, Dr. C. P. Brown and I were able to show conclusively that the periosteum had nothing to do with regeneration of the bone, and advocated at that time not only removing the periosteum from the transplant before it was removed from the tibia, but also taking off the superficial layer of the bone just beneath the periosteum and roughening the transplant with the chisel, in order to increase the osteoblastic-producing surface.

In our last patient, operated on April 19, we not only removed the periosteum from the transplant, but also traumatized the surface formerly covered by periosteum. As the osteoblasts do not penetrate the periosteum, and as we have found that we obtain a greater reproduction of new bone when the haversian canals are well opened up by roughening the bone with the chisel, it necessarily follows that we shall secure greater circumferential reproduction if no part of the transplant is covered by an impervious membrane.

I would suggest that there may be a small sequestrum thrown off from the transplant in Dr. Wetherill's case, which happened in a case of ours two years ago in which there was a slight latent infection. The sequestrum constituted about one-fourth of the original graft, the other three-fourths having healed in and reproduced a considerable amount of bone.

W. L. Brown, M.D., El Paso, Tex.

Evidences of Arsenical Poisoning

To the Editor:—In an editorial on this subject in The Journal, May 31, 1913, p. 1710, it is stated that "by no ordinary measures, such as those to which criminals would be likely to resort, could arsenic be introduced into the body after death and be carried by the ordinary processes of diffusion to a point [the brain] so remote from the central portions of the body."

This is so at variance with established facts that I wish to direct your attention to the matter in the interest of medical jurisprudence.

It is true, as the editorial points out, that formerly the belief was entertained that if arsenic is found in the brain of a cadaver, the poison must have been introduced into the body before death. During the past thirty years, however, many experiments on the dead bodies of man and of the lower animals have abundantly established the fact that this view is entirely untenable. The record of these experiments is found in easily accessible literature.

Vaughan in 1883 took up the subject and became the pioneer investigator. With an ordinary syringe, he injected arsenic into a cadaver by the mouth and the rectum. The body was put aside for twenty-five days; then the brain was removed and submitted to chemical analysis; *in a little* more than a thousand grams of it he found 3.63 mg. of arsenic, calculated as the trioxid. In 1888 Witthaus continued the investigation. He first used three cadavers, and into two of them he injected arsenic through the mouth; in the third the arsenic was injected into the stomach and abdominal cavity. Fourteen days later the brains of all three were examined and arsenic was found in every one. In one case the vertex and the base were tested separately, and it was discovered that there was quite as much arsenic in the one part as in the other—showing the rapidity and completeness of the diffusion. In a fourth case Witthaus injected the arsenic directly into the stomach and at the end of five days he separated from the brain 8.28 mg. of arsenic calculated as the trioxid.

In the majority of the foregoing experiments only easily obtainable apparatus was used and the arsenic was injected into that part of the body (the mouth) to which a criminal could have ready access. It will also be seen that the amount of arsenic found in the brain after post-mortem injection was greater than that found by Ekeley (1.2 mg., calculated as As_2O_3, in 1,000 gm. of the brain) in the case reported by him (and referred to in the editorial), in which the arsenic was taken before death.

Walter S. Haines, M.D., Chicago.

The Insanitary Labor Camp

To the Editor:—In The Journal, May 10, 1913, p. 1464, is an editorial on this subject. While I concur for the most part in the deductions drawn, one statement is so obviously based on incomplete information that, in justice to our own and several other Western states, I call attention to it. The sentence is the following: "Because these camps are controlled by no laws, and because they are not supervised by any state department, they are a grave menace to the health of the laborers occupying them and the inhabitants of distant as well as adjacent towns."

Reports on industrial camps have been made to the Conference of State and Provincial Boards of Health for each of the past four years. The last report, made by myself and Dr. T. D. Tuttle of Montana, has not yet been published, but is practically ready for distribution. This report contains a digest of the laws and regulations controlling industrial camps, as nearly as we could determine them last year. So far as I know, practically all the western provinces of Canada and the states of Montana, Idaho, Utah, Louisiana and Washington have done something, at any rate, in attempting to control these camps through their state boards of health. Certain other states, notably Kansas and California, have made some investigations. Therefore it can scarcely be said that these camps are not supervised by *any* state department.

On page 628 of the *Public Health Reports* of March 28 will be found a copy of our rules and regulations relating to camps. I believe, although I have not the exact date at hand, that the rules of the Louisiana board have been in effect for several years. The Washington State Board of Health rules have been in effect since 1910. On page 35 of our last biennial report will be found a brief account of the work of this board on industrial camps, and also in the report of the sanitary inspector, page 112, is a more detailed reference to some camps inspected. In all, this department has investigated something over 500 industrial camps in the last three years and has had exceptionally good success in carrying out sanitary improvements. The investigations are far from what they should be because of lack of funds and field force, but we feel that in no other line of work have we accomplished greater results with the limited funds at our command. This subject is covered more fully in our last conference of state health officials' report, which will soon come from the press.

Eugene R. Kelley, M.D., Seattle, Wash.
Commissioner, Washington State Board of Health and Bureau of Vital Statistics.

[Comment.—It is shown by our correspondent that several states are exercising supervision over the sanitation of labor camps The facts on which our editorial was based were drawn chiefly from conditions existing in New York. The second sentence, of course, should have read: "Because in many states these camps are not controlled by any laws and are not supervised by any state department . . ." The danger to health from labor camps is evidently becoming widely recognized.—Ed.]

Suggestion for a Committee to Pass on New Medical Books

To the Editor:—May I suggest for the consideration of the American Medical Association at its coming meeting the desirability of appointing a committee for the purpose of passing on the intrinsic merits of medical publications placed on the market?

Publishing houses are financially interested in their output, and reviews are too often written hastily and sometimes perhaps with a personal bias; while no single reviewer associated with any periodical can be expected to possess such encyclopedic knowledge as is necessary in a field so varied and extensive. For these reasons thousands of physicians, and especially those far removed from publishing centers, are quite unable to decide what books may be most worthy of their attention.

An advisory or reviewing committee (like the Council on Pharmacy and Chemistry) of capable physicians, appointed by the Association because of their technical and practical knowledge of the various specialties and whose members may reside in different sections of the country, could without invidious distinction classify books in such way as to enable purchasers to make a more satisfactory selection than is now possible.

Many of our fraternity cannot afford to purchase largely, and it is often a great disappointment to discover, when too late, that a poor investment has resulted from an insufficient knowledge of, or extravagant claims made for, a much needed work.

The book review of such a committee should appear in the columns of The Journal, and coming from such authority would add greatly to its value for the busy practitioner or the young graduate who is bewildered by the many and too often misleading claims made for books. Approved works could be classified as are the medical colleges by the Council on Medical Education—A, B, C, etc.

G. Wilds Linn, M.D., Malvern, Pa.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE ASEPTIC THERMOMETER

In an editorial on "The Clinical Thermometer as a Vehicle of Infection" (The Journal, May 10, 1913, p. 1467), our readers were asked to suggest methods of making the thermometer aseptic. A number of replies have been received, which are summarized below.

Dr. F. W. Bremer, Pittsburgh, Pa., has employed a thermometer case a little larger than the ordinary one, having an extra threaded collar to which a wick or gauze cover or "stocking" is attached. This cover is made thick and coarse enough to hold by its capillarity a quantity of 40 per cent. solution of formaldehyd which would keep the thermometer antiseptic at all times, both by contact and by its fumes. The thermometer, of course, has to be washed and dried both before and after use. At present, however, Dr. Bremer uses a roll of coarse paper in his thermometer case into which the thermometer fits tightly, the paper being soaked with formaldehyd solution.

Dr. G. M. Olson, Fargo, N. D., suggests that the ordinary hard-rubber thermometer case may be filled with alcohol, and if the top is screwed tight it will not leak and the case may be turned up so as to sterilize the entire thermometer. After use, the thermometer should, of course, always be washed in water.

Dr. Louis J. Smith, Percy, Ill., also has used the latter method for some time and believes it is ideal.

Dr. H. M. Folkes, Biloxi, Miss., for a number of years has carried with him a book of cigarette paper and a 2-dram vial of pure alcohol. When getting ready to take a patient's temperature, he takes a sheet of cigarette paper, saturates it with alcohol, and cleanses the thermometer just before use.

Dr. E. T. Baker, Moscow, Idaho, has designed, for the individual thermometer of the patient or the nurse, a metal receptacle, with a tight cap, containing a glass tube similar to a test-tube, which may contain any desired antiseptic. The whole outfit is to be fastened to the wall or some other convenient place in the hospital ward or sick-room.

Dr. F. A. McGrew, Delta, Colo., carries in his medicine case a small, flat, oblong metal box containing absorbent cotton and an ounce bottle filled with tincture of iodin diluted with an equal quantity of alcohol. After the thermometer has been used, some member of the family is requested to wash it in cold water; then a little pledget of cotton is moistened with the iodin solution and the thermometer is thoroughly washed with it. It is then put in the case without removing the excess of solution until the time of using the thermometer again.

Dr. John L. Dryer, Santa Ana, Cal., cleans the thermometer after use and then dips it into a 40 per cent. solution of formaldehyd, after which it is returned to the case and the cover tightly screwed down. Another plan is to wrap a thin film of absorbent cotton about the thermometer and dip it in 98 per cent. alcohol, returning it to the case as above.

Dr. Samuel Kennedy, Shelbyville, Ind., says that accurate and tested thermometers can be procured for $3.50 per dozen or 29 cents each, and that it is not necessary to buy more expensive instruments. He keeps a large number of thermometers and carries a number of them with him on his rounds, using a clean thermometer for each patient. On returning to the office the thermometers are carefully washed with soap and water, rinsed in cold water and then allowed to stand in alcohol for about an hour. They are then returned to their cases, which are sterilized by boiling, to be used again the next day.

Dr. Henry B. Hemenway, Evanston, Ill., calls attention to a thin celluloid envelope or cover, which is supplied by the instrument dealers, into which the thermometer is slipped before being placed in the patient's mouth. This does not interfere with the correct registration of the temperature. The envelopes are cheap and a new one, of course, is used for each patient, although one may be used a number of times for the same patient.

Dr. Edward J. Brown of Minneapolis cuts a strip of blotting-paper ⅜ inch wide and inserts it in the metal thermometer case. The thermometer, after use and washing, is dipped in compound cresol solution and placed in the case. The blotting-paper soon becomes saturated and causes continuous disinfection of the thermometer.

Dr. Frank R. Hart, Santa Cruz, Cal., has devised a thermometer case made of hard rubber, consisting of an inner and outer tube. The inner tube is so made as to hold any ordinary-sized clinical thermometer. It screws into the outer case. The walls of the inner tube are punctured with many small holes through which the fluid antiseptic, contained in the outer case, penetrates by pressure and by capillary attraction, the holes being extremely small. Any desired antiseptic may be used and the thermometer is constantly moistened with the solution.

RATIO OF THE SEXES AT BIRTH

To the Editor:—1. What are the latest figures as to the ratio of the sexes at birth? I am especially interested in the incidence of the sexes in England and the United States, and also in other countries if statistics are available.

2. What evidence is there that the ratio changes after wars resulting in the deaths of many males, and also following famines or seasons of great plenty, etc.?

C. E. Bennett, M.D., Aneta, N. Dak.

Answer.—1. This matter was discussed in The Journal, Aug. 15, 1908, p. 616. As a general statement, the average is 1,056 males to 1,000 females. Statistics of births have frequently been given in the Berlin and other foreign letters, and by consulting them recent statements in regard to the relation of the sexes may be obtained. The following, also, may be consulted:

Vigor and Yule: The Sex Ratios of Births in the Registration Districts of England and Wales, 1881-1890, *Jour. Roy. Statistical Soc., London*, 1906, xlix, 576.
Proportion of the Sexes in the United States, U. S. Census Bureau, Bull. 14, 1904.
Nichols, J. P.: Numerical Proportions of the Sexes at Birth, *Mem. Am. Anthropol. Assn.*, i, Part 4.
Jones, H. R.: Industrial Employment of Married Women; Its Influence on Birth-Rate and Sex Ratio at Birth, *Lancet, London*, Aug. 10, 1912.

2. There seems to be some evidence in support of the statement that the proportion of the sexes varies with the condition of nutrition. The consensus of opinion, however, is that these conditions cause no alteration in the proportion of the sexes at birth. Some interesting statistics on this subject may be found in the following:

Marshall, F. H. A.: Physiology of Reproduction, London and New York, 1910, p. 648.
Newcomb, Simon: A Statistical Enquiry into the Probability of Causes of the Production of Sex in Human Offspring, Carnegie Institute, Washington, 1904, p. 27.
Von Mayr: Die Gesetzmässigkeit im Gesellschaftsleben.
Mayo-Smith, Richmond: Statistics and Sociology, New York, 1895, p. 73.

DESTRUCTION OF BEDBUGS AND COCKROACHES

To the Editor:—Please give me methods for the destruction of bedbugs and cockroaches, including formulas for preparations which may be applied to the beds and other hiding-places of these insects.

F. W.

Answer.—The destruction of bedbugs by fumigation with hydrocyanic acid gas is effective, but great caution must be observed. This method is not suitable for use by others than experts. One room at a time may conveniently be fumigated by sulphur candles, 2 pounds to the thousand cubic feet of air-space; the room should be shut tight and the sulphur burned in a coal-hod placed in a pan of water. Fumigation is required to kill all the bugs, as they are in the habit of concealing themselves in cracks behind wainscoting, under loose wall-paper, and in other places.

Brass or iron beds can be rid of bugs by the use of fire. The bed is removed to a concrete floor or out of doors, alcohol poured into all the crevices and immediately ignited. A burning newspaper may be passed under the springs. Rubbish, old wooden beds, old picture frames, outhouses and chicken-coops which have become infested should be burned.

For use on wooden bedsteads and available crevices one of the best applications is hot water. The most practical way is to make liberal applications of benzin or kerosene, either used alone or made up according to the following formula:

> Nitrobenzene (oil of mirbane)—1 dram.
> Oil of turpentine—7 drams.
> Benzin, add enough to make 1 pint.

A solution of corrosive sublimate is another agent for the destruction of these insects. One of the most convenient methods for applying liquids to the crevices in which bedbugs hide is by the use of a wash-bottle with pointed tip. A rubber atomizer bulb can be attached to the mouth-tube and a continuous stream of liquid can be directed into the crevices.

The bedbug is also discussed in an editorial in this issue.

While cockroaches are not known to have any considerable share in the conveyance of diseases, it is desirable to get rid of them. The following directions are given in the *Pennsylvania Health Bulletin*, February, 1912:

"It is difficult to get rid of this pest. They have few natural enemies, an ichneumon fly and the tree-frog being the only ones known. They readily detect poisoned foods, avoiding arsenic and other common poisons. The smoke of pyrethrum powder will paralyze but not kill them. Flowers of sulphur dusted along the baseboards repels them." The bulletin also recommends phosphorus paste and gives directions for making it. Phosphorus paste is an unsafe preparation for any but an expert to make. It is better to purchase it at a drug-store. The fumes of carbon bisulphid in the proportion of 1 pound to 1,000 cubic feet of air-space (if the room is sealed) will destroy every roach. As this is an explosive in the presence of fire, great precaution is necessary. It is also poisonous to human beings and the lower animals and has to be used very carefully.

A food, prepared by taking 1 part of plaster of Paris and 3 or 4 parts of flour in one saucer with plenty of water in another saucer, *bridged for easy access*, makes a simple remedy. The insects readily eat the mixture and drink freely. The plaster sets and clogs the intestines. The dead bodies disappear, in all probability being eaten by the survivors. Finally, ingenious traps have been contrived, the simplest of which is the use of a quart fruit-jar. The jar is partially filled with stale beer and inclined so that it is easy of access but prevents the roach from escaping. A rough stick leaned against the opening serves as a gang-plank. Once in the jar the insects perish or are easily destroyed.

THE BRITISH MEDICAL PRACTICE ACT

To the Editor:—Please tell me the origin of the British Medical Practice Act, its workings and present status.

Charles P. Frischbier, M.D., Brooklyn.

Answer.—The present British Medical Practice Act dates from 1858, in which year Parliament enacted a law providing a uniform standard of registration for physicians and surgeons. Previous to that time a large number of organizations had held the right to examine and license practitioners of various kinds. This right was in some cases derived from an act of Parliament, in others from a special charter direct from the crown, and in other cases was one of the ancient privileges possessed by certain colleges and organizations. In some cases the right to examine and license practitioners and to charge a fee therefor is about the only privilege remaining, and the organizations interested vigorously opposed any effort to deprive them of this right. The act of 1858 was passed after long deliberation and much discussion in medical journals, popular reviews and newspapers. The preamble of the act not only sets forth its object, but clearly shows the difference between English and American legislation for regulation of the practice of medicine. The preamble reads. "Whereas it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners." etc. In other words, the British Medical Practice Act is strictly definitive and not in any sense restrictive. It does not prohibit the practice of medicine and surgery but merely defines who are qualified and forbids any person to claim to be qualified when he is not. The enforcement of the act is placed in the hands of a general council, consisting of one person chosen by each of the following bodies: Royal College of Physicians; Royal College of Surgeons of England; universities of Oxford, Cambridge, Durham and London; College of Physicians of Edinburgh; College of Surgeons of Edinburgh; Faculty of Physicians and Surgeons of Glasgow; University of Edinburgh and two universities of Aberdeen; University of Glasgow; University of St. Andrew's; King's and Queen's College of Physicians in Ireland; Royal College of Surgeons in Ireland; Apothecaries Society of London; Apothecaries Hall of Ireland; University of Dublin; Queen's University in Ireland, and six persons appointed by the crown, four from England, one from Scotland and one from Ireland.

It will be noted that this council with the exception of the six persons appointed by the crown is an educational body, representing the various colleges, universities and professional organizations. It is authorized to examine and license persons to practice medicine and surgery. Various amendments have been adopted. In 1886 an amendment which was practically a new law was enacted.

The practical workings of this law are to permit any person to treat the sick in any way that he sees fit, without any examination or license, provided he does not represent himself to be that which he is not, namely, a legally qualified practitioner under the British law. Only licensed practitioners are eligible to appointment to government medical positions or as health officers, coroners' physicians, etc., or are recognized as entitled to sign birth or death certificates or legal documents requiring a physician's signature.

The British method of regulating the practice of medicine has many advantages and is worthy of careful study.

GIRARD TREATMENT FOR SEASICKNESS

To the Editor:—What is the Girard treatment for seasickness? Please give full particulars, as it has been spoken of quite favorably by some of my colleagues who have used it.

R. D. M., Brooklyn.

Answer.—The Girard treatment for seasickness is that described in the article entitled "Atropin and Strychnin Combined, a Specific for Seasickness," by Brigadier-General Alfred C. Girard, U. S. A., retired, which appeared in The Journal, June 23, 1906, p. 1925. Dr. Girard advises, as the result of his observations, that, in almost every instance, hypodermic injection of 1/120 of a grain of atropin sulphate with 1/60 of a grain of strychnin sulphate is readily borne by adults and as a rule causes no disagreeable sensation. The good effect of the treatment is believed to lie in the stimulating effect of the atropin on the circulation in the brain, while the strychnin causes, through the spinal cord, a similar action on the respiration. The medicine may be put up in capsules for administration through the mouth, but, in this case, the effect is not produced so rapidly and there is a possibility of accumulation in the stomach with its consequent disadvantages.

INTERNATIONAL MEDICAL CONGRESS

To the Editor:—Where can one obtain information about the International Medical Congress, which meets in London in August? How can one become a member? C. J. F.

Answer.—Something about the congress will be found in The Journal in the London Letter, this issue, also June 7, 1913, p. 1804; May 24, 1913, p. 1649, and April 12, 1913, p. 1175. The American secretary, Dr. Allen of Philadelphia, has already left for Europe and inquiries for circulars of information may be addressed to Dr. W. S. Thayer, 406 Cathedral Street, Baltimore.

Membership in the congress costs $5, which may be sent to the treasurer, 13 Hinde Street, London W., England. On arrival in London one may obtain information from the general secretary, Dr. W. B. Harringham, at that same address. If one has not remitted in time to have his card of identity forwarded to him in his country, he can secure it on arrival in London from the secretary or the treasurer. This card allows concessions in price on a number of steamship lines and on railroads in England, France, Spain and Portugal.

VACCINE ARTICLES IN PAMPHLET FORM

To the Editor:—Enclosed find 75 cents, for which kindly send me the book "Disturbances of the Heart." I trust that the series of articles on vaccine therapy now being published in The Journal will be printed in book form.

C. L. Sherman, M.D., Luverne, Minn.

Answer.—These articles on vaccine therapy are to be gathered in a paper-covered reprint, which we will probably sell at the nominal price of 10 cents.

STERILIZATION OF CATGUT

To the Editor:—Please tell me how plain and chromicized catgut and silk and silkworm-gut ligatures may be sterilized by the general practitioner in country practice: Can it be done satisfactorily? If so how is it done, and how is the gut preserved when bought unsterilized from reliable concerns?

H. B. Fitts, M.D., Provincetown, Mass.

Answer.—An efficient method of sterilizing catgut consists in the immersion of raw catgut in skeins for eight days in a mixture of iodin 1 part, potassium iodid 1 part and distilled water 100 parts (Claudius' method). It is then kept in alcohol or 3 per cent. phenol (carbolic acid) solution and is ready for use. Chromicized catgut, as purchased in the market, is ready for use. It is made by immersing raw catgut wound on spools in a solution of potassium bichromate 1.5 gm., glycerin and phenol, each 10 c.c., and water 1 liter, for twenty-four hours. Then it is drained, dried and placed in 2 per cent. dilution of liquor formaldehydi for from one to seven hours, depending on size of catgut, and is kept in 95 per cent. alcohol with from 8 to 10 per cent. glycerin added.

Catgut already prepared for use is on the market and can be depended on if made by a reliable firm. The glass containers are immersed in 95 per cent. alcohol and are removed from this fluid only when catgut is needed. Silk and silkworm-gut are boiled in plain water for half an hour just before using, or they may be placed in a steam sterilizer with the dressings. They are then ready for use.

DID NOT DISCUSS IT

To the Editor:—I notice that in The Journal, May 31, 1913, p. 1731, under the report of the proceedings of the Medical Association of Georgia, I am quoted as discussing Dr. J. W. Palmer's paper on "Treatment of Pneumonia." I did not discuss this paper, and the remarks attributed to me on the subject were probably made by some one else.

Claude A. Smith, M.D., Atlanta, Ga.

Medical Economics

This Department Embodies the Subjects of Post-Graduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

STATE PROVISIONS FOR HEALTH SUPERVISION OF SCHOOLS

So many requests for information regarding the provisions in the various states for the health supervision of schools have been received, and so much interest has been manifested on the subject, both by physicians and by teachers, that it seems advisable to publish an abstract of existing laws. In most states the provisions are in the form of special statutory enactments. In a few states, in which the state board of health is given sufficient authority, it is in the form of regulations or rules adopted by the state board. As pointed out in a previous article on this subject, the simpler and broader the law the better.

ABSTRACT OF LAWS AND REGULATIONS

California.—Adopted 1909. Permissive. Applies where adopted. Administered by school authorities. Provides for supervision of teachers and pupils as to health and general physical development. Inspectors may be either physicians or educators.

Colorado.—Adopted 1909. Mandatory. Applies to all public schools. Administered by school authorities. Teachers or principals test sight, hearing and breathing of all pupils annually. School authorities report to parents mental, moral or physical defectiveness discovered. Enforcement by State Bureau of Child and Animal Protection.

Connecticut.—Adopted 1907. Permissive. Applies where adopted. Administered by school authorities. Physicians inspect children for contagious diseases. Physicians may examine teachers, janitors and school premises. Physicians conduct sight, hearing and physical examinations of children annually. Defects of children reported to parents. School authorities may appoint school nurses.

District of Columbia.—Regulations of health officer and board of education. Adopted in present form in 1907. Mandatory. Applies to all public schools. Administered by health authorities. Physicians examine children for contagious diseases. Physicians examine sanitary conditions of buildings. Physicians may examine teachers and janitors.

Indiana.—Adopted 1911. Permissive. Amended 1913 and made mandatory. Applies where adopted. Administered by school authorities. Physicians inspect children for contagious diseases. Teacher may test sight and hearing annually. Physicians conduct physical examinations of children. Defects of children reported to parents. The students are so divided that there are not more than 2,000 children to each physician appointed. Compensation of physicians not less than $5 for each school month. Physician may examine teachers, janitors and buildings. If parents are too poor to provide necessary medical treatment it shall be paid for from public funds. Penalty of $5 for violations of provisions of act.

Louisiana.—Adopted 1911. Regulations of sanitary code of state board of health having force of law. Mandatory. Applies to all public schools. Administered by school authorities. Principal of each school makes monthly report on physical condition of children, and sanitary condition of buildings on blanks furnished by the state board of health. Principals and teachers exclude children suffering from contagious diseases.

Maine.—Adopted 1909. Mandatory on condition. Applies to cities and towns of less than 40,000. Administered by school authorities. The children are so arranged that there are not more than 1,000 pupils to each physician appointed. Physicians inspect children for contagious disease. Physicians may examine teachers, janitors and buildings. Tests of sight and hearing as to pupils annually by teachers or physicians. Physical examination of pupils annually by physicians. Defects of children reported to parents.

Massachusetts.—Adopted 1906; amended 1910. Mandatory. Applies to all public schools. Administered by school or health authorities. Physicians inspect children for contagious diseases. Physicians may examine teachers, janitors and buildings. Tests of sight and hearing of pupils made by teachers annually. Physicians make physical examinations of children annually. Defects of children reported to parents. Normal schools train students in testing sight and hearing. Physicians conduct examinations of minors applying for age and schooling certificates.

Minnesota.—Regulations of board of health having force of law. Adopted 1910. Mandatory. Applies to all public schools. Administered by health authorities. Physicians examine for contagious diseases. Physicians may inspect teachers, janitors and buildings. Physicians conduct physical examinations of children annually. Defects of children reported to parents. Teachers test sight and hearing of children annually. Normal schools train pupils in testing sight and hearing.

New Jersey.—Adopted 1909. Mandatory. Applies to all public schools. Administered by school authorities. Physicians examine for contagious diseases. Physicians conduct physical examinations, including sight and hearing tests. Defects reported to parents. Physicians deliver hygiene lectures to teachers. Parents and guardians may be proceeded against as disorderly persons for failure to remove any pathologic condition which may cause a child's exclusion from school.

New York.—Adopted 1910. Permissive. Authorizes school authorities to expend school funds for the support of medical inspection; amended 1913.

North Dakota.—Adopted 1911. Permissive. Applies where adopted. Administered by school authorities. Physicians conduct physical examinations annually. Defects reported to parents. Cooperates with board of health to curb contagious disease and to secure treatment for indigent children.

Ohio.—Adopted 1910. Permissive. Applies to cities. Administered by school authorities, but powers may be delegated to health authorities. Physicians inspect children and schools. School nurses may be employed.

Pennsylvania.—Adopted 1911. Mandatory in districts of first and second class. Permissive in districts of third and fourth class. Districts of first class are those of more than 500,000 population, second class from 30,000 to 500,000, third class 5,000 to 30,000 and fourth class less than 5,000. Administered by school authorities. Physicians conduct complete physical examinations of children annually. Physicians make sanitary inspection of school premises annually. In districts of fourth class medical inspectors are appointed by state commissioner of health. Provision for employment of graduate nurse.

Rhode Island.—Adopted 1911. Mandatory with permissive clause providing for employment of physicians. Administered by school authorities. Physicians when employed make annual examination of pupils, teachers and janitors in public and private schools and inspect buildings and surroundings. Annual vision and hearing test by physicians or teachers. Defects of children reported to parents.

Utah.—Adopted 1911. Mandatory. Applies to all public schools. Administered by school authorities. Teachers or physicians examine all children annually for defects of sight or hearing, defective teeth or mouth-breathing. Defects reported to parents.

Vermont. — Adopted 1910. Permissive. Applies where adopted. Administered by school authorities. Physicians inspect pupils as provided by rules of state board of health. On request, physicians examine pupils of private schools.

Virginia. — Adopted 1910. Permissive. Applies where adopted. Administered by school authorities. Authorizes school boards to support systems of medical inspection.

Washington.—Adopted 1909. Permissive. Applies to cities of the first class. Administered by school authorities. Authorizes school boards to appoint medical inspectors who shall report monthly on health conditions in each school.

West Virginia.—Adopted 1911. Mandatory in cities. Permissive in country districts. Administered by school authorities. Physicians inspect children for contagious diseases. Physicians conduct physical examinations annually. Physicians on request of board report on lighting, ventilation, etc. School nurses may be employed.

UNIFORMITY DESIRABLE IN LEGISLATIVE ENACTMENTS

In the recent legislative sessions fourteen states, including Colorado, Indiana, Minnesota, Nebraska, Ohio, Oklahoma and Texas, have considered health supervision of schools and have in most cases enacted laws, some amendatory, as in Indiana, others dealing with the matter for the first time.

An examination of the various statutes would suggest that there should be uniformity of legislative enactment, which would require:

1. Compulsory health supervision of school children, etc.
2. A provision placing the administration of the system in the hands of the school authorities, with discretion to cooperate with the health authorities in an epidemic, etc. Whether the inspection should be in the hands of the school authorities or the local health board is still an open question.
3. Inspection by a physician to control contagious diseases.
4. Annual examination by physician to discover defects of a deterrent nature.
5. Annual tests of sight and hearing by teachers.
6. Examination of teachers and janitors and regular inspection of buildings, premises and drinking-water to insure sanitary condition.
7. Normal schools to train in conducting vision and hearing tests.
8. Provision for the employment of school nurses.
9. A penalty or other provisions to secure enforcement of the law.

Clearing Texas of Quacks.—The thing for us to do then, if we desire to enforce the medical practice act, says the *Texas State Medical Journal*, is to assist in securing the evidence. Whenever we undertake prosecutions in earnest and go about it in an intelligent manner, success usually follows our efforts. We are moved to these remarks by the continued success of Bexar County Society in cleaning up San Antonio. Suit was recently filed for the revocation of the licenses of Drs. T. M. Stotts and S. V. Young of the advertising firm of Drs. Stotts & Co., with what appears to be ample evidence in the case; fine and jail sentence were imposed on an "Indian doctor" who had pleaded guilty to practicing medicine without a license, and fines and jail penalties were given two "magnetic healers" who also pleaded guilty of the charge of practicing medicine without a license. The state is full of undesirables of this class and we trust that other societies will follow the example of Bexar County.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama: Capitol, Montgomery, July 8. Sec., Dr. W. H. Sanders, Montgomery.

Arizona: Phoenix, July 1. Sec., Dr. John Wix Thomas, National Bank of Arizona Building.

Colorado: Denver, July 1. Sec., Dr. David A. Strickler, 612 Empire Building.

Connecticut: Regular, City Hall, New Haven, July 8-9. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 8. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue.

Delaware: State Society and Homeopathic, Dover and Wilmington, June 17-19. Secretary of the Medical Council, Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

District of Columbia: Washington, July 8. Sec., Dr. George C. Ober, 125 B St., S. E.

Illinois: Coliseum Annex, Chicago, June 17-19. Acting Sec., Mr. Amos Sawyer, Springfield.

Maryland: Regular, 1211 Cathedral St., Baltimore, June 17. Sec., Dr. J. McP. Scott, Hagerstown.

Massachusetts: State House, Boston, July 8-10. Sec., Dr. Walter P. Bowers, Room 159, State House.

Missouri: Gymnasium of St. Louis University, St. Louis, June 16-18. Sec., Dr. J. A. B. Adcock, Jefferson City.

Montana: Senate Chamber, Capitol Bldg., Helena, July 8. (First special examination held aside from regular semi-annual examinations.) Sec., Dr. William C. Riddell, Helena.

New Hampshire: Concord, July 8-9. Regent, Mr. H. C. Morrison, State Library.

New Jersey: Capitol Bldg., Trenton, June 17-18. Sec., Dr. H. G. Norton, 429 E. State St., Trenton.

New Mexico: Santa Fe, July 14. Sec., Dr. W. E. Kaser, East Las Vegas.

New York: June 24-27. Chief of the Examinations Division, Harlan H. Horner, Department of Education, Albany.

North Dakota: Grand Forks, July 1. Sec., Dr. G. M. Williamson.

Oklahoma: Guthrie, July 8-10. Sec., Dr. John W. Duke, Guthrie.

Oregon: Portland, July 1. Sec., Dr. E. B. McDaniel, 704 Electric Building.

Pennsylvania: Harrisburg, Philadelphia and Pittsburgh, June 23-25. Sec., Mr. Nathan C. Schaeffer, Department of Public Instruction, Harrisburg.

Rhode Island: State House, Providence, July 10. Sec., Dr. Gardner T. Swarts, State House.

Texas: Capitol Bldg., Austin, June 24-26. Sec., Dr. W. L. Crosthwait, Suite 1110 Amicable Bldg., Waco.

Utah: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 310 Templeton Building.

Virginia: Richmond, June 24-27. Sec., Dr. Herbert Old, Norfolk.

West Virginia: Charleston, July 14-16. Sec., Dr. H. A. Barbee, Point Pleasant.

Wisconsin: Milwaukee, June 24-26. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

Wyoming: State House, Cheyenne, June 25-27. Sec., Dr. J. B. Tyrrell, Laramie.

College Reported Not Recognized Has Graduates

During last year a new medical college, at first called the Eclectic School of Medicine of Milton University, was organized in Baltimore. After a short time Milton University is said to have disclaimed any relationship with it, and the name was changed to the Eastern University School of Medicine. After investigation the institution was also reported by the Maryland State Board of Medical Examiners as not recognized, and considerable local publicity was at the time given to that fact. Nevertheless, the school is said to have continued, and to have had about thirty-eight students, all of whom were in the senior class and all of whom graduated. It would be interesting to know where these students received their previous medical training.

Although not eligible for examination, some of these "graduates" were said to have passed the examination of the Eclectic Board of Georgia and are now seeking licenses in Maryland and elsewhere through reciprocity. Maryland has properly refused on the ground that being ineligible for the Maryland examination, these candidates were also ineligible for registration through reciprocity.

Indiana January Report

Dr. W. T. Gott, secretary of the Indiana Board of Medical Registration and Examination, reports the written examination held at Indianapolis, Jan. 14-16, 1913. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 20 of whom 18 passed, including 1 osteopath, and 1 failed. One candidate did not complete the examination. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Colorado	(1912)	92.8
Hahnemann Medical College and Hospital, Chicago	(1912)	82.8
College of Physicians and Surgeons, Chicago	(1912)	89.4, 92.1
Bennett Medical College	(1912)	83.5
Northwestern University Medical School	(1912)	91.0
Rush Medical College	(1911)	93.6
Indiana University	(1912)	88.7
Physio-Medical College of Indiana	(1881)	75.0
University of Louisville	(1912)	75.2, 90, 92.4
American Medical College, St. Louis	(1912)	87.5
N. Y. Homeopathic Med. College and Hospital	(1892)	80.1
Albany Medical College	(1892)	90.4
University of Pennsylvania	(1891) 79.9; (1912)	92.8
FAILED		
University of Louisville	(1912)	71.5

South Dakota January Report

Dr. L. G. Hill, secretary of the South Dakota State Board of Medical Examiners, reports the written examination held at Watertown, Jan. 10-11, 1913. The number of subjects examined in was 13; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 15, all of whom passed. Two candidates were licensed through reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Rush Medical College	(1902) 83; (1911)	87, 89, 91
Northwestern University Medical School	(1910)	84
Bennett Medical College	(1909) 76; (1911)	90
College of Physicians and Surgeons, Chicago	(1893) 85; (1912)	81, 83
Chicago College of Medicine and Surgery	(1911)	80
National Medical University	(1894)	78
Ensworth Medical College	(1911)	92
Creighton Medical College	(1912)	84, 86

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Barnes Medical College	(1899)	N. Dakota
Lincoln Medical College	(1910)	Nebraska

Missouri February Report

Dr. J. A. B. Adcock, secretary of the Missouri State Board of Health, reports the written examination held at St. Louis, Feb. 24-26, 1913. The total number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 39, of whom 29 passed and 10 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Arkansas	(1911)	88
Rush Medical College	(1906)	90
Johns Hopkins University Medical School	(1909) 87; (1912)	85, 89.
Harvard University Medical School	(1911) 89; (1912)	85
Homeopathic Medical College of Missouri	(1898)	78
Washington University, St. Louis	(1899) 78; (1901)	78, 78
University Medical College, Kansas City	(1912)	79, 86
Marion-Sims College of Medicine	(1891) 78; (1898) 78; (1899)	77.
Marion-Sims Beaumont College of Medicine	(1903)	79
American Medical College	(1890) 78; (1892) 80; (1894) 78; (1911)	76.
St. Louis University	(1912)	86
Missouri Medical College	(1889) 78; (1896)	80
Columbia University, College of Phys. and Surg.	(1910) 83; (1911)	89.
Creighton Medical College	(1908)	80
Vanderbilt University	(1912)	88
Royal University of Palermo, Italy	(1906)	80
FAILED		
Barnes University	(1907) 68.3; (1910) 51.8; (1911)	64.9
Ensworth Medical College	(1912)	62.4
St. Louis College of Physicians and Surgeons	(1906) 46.6; (1907) 66.3; (1908)	65.2.
American Medical College, St. Louis	(1909) 56.4; (1912)	71.3
Homeopathic Medical College of Missouri	(1908)	61.5

Book Notices

A Manual of Surgical Treatment. By Sir W. Watson Cheyne, Bart., C.B., D.Sc., Senior Surgeon to King's College Hospital, and F. F. Burghard, M.S., F.R.C.S., Surgeon to King's College Hospital. Second Edition. In 5 Volumes. Volume IV. Cloth. Price, $6 net. Pp. 622, with 208 illustrations. Philadelphia: Lea & Febiger, 1913.

The fourth volume of the new edition is a comprehensive one. In it are discussed the surgical affections of the jaws and tongue, pharynx and esophagus, stomach and intestines, rectum and anus. The text has been revised and is said to contain the latest researches in surgery of the digestive tract. Under the caption of treatment of malignant tumors of the upper jaw, the means of producing anesthesia are well described and the intravenous administration of ether and intratracheal insufflation are recommended as being especially adapted to this class of work. All the topics considered are discussed at some length, although always from the authors' point of view; therefore exception might be taken to many statements, not only by reason of difference of opinion but also on the basis of error. For instance, it is said that mechanic ileus due to gall-stones is rare. While that condition is by no means a common one, yet it occurs sufficiently often not to be classed as a surgical or clinical curiosity, and a gall-stone of sufficient size to block the small intestine may and does ulcerate through the wall of the gall-bladder into the intestine. Exception might also be taken to what is said of ileosigmoidostomy and excision of the colon—subjects which are dismissed in a few words with decidedly unfavorable comment. These operations have hardly been performed often enough and for a long enough period of time to warrant drawing positive conclusions as to their worth. The Andrews imbrication method of suture in herniotomy is not mentioned. Intestinal suture is dismissed with a mere mention of only one method of suturing, the Lembert. It would seem that in a work of this size and scope, every subject considered could be discussed fully, yet that is not the case in this instance. On the whole, however, the book contains much of value. It is not comparable with similar American works.

The Surgery of the Skull and Brain. By L. Bathe Rawling, F.R.C.S., Surgeon, with Charge of Outpatients, St. Bartholomew's Hospital. Cloth. Price, $6. Pp. 340, with 96 illustrations. New York: Oxford University Press, 1912.

Ten years of study and observation are said to form the basis of this work. The first chapter deals with craniocerebral topography and the succeeding chapters with the various lesions of the skull and brain. The section which may be considered the best is that dealing with tumors of the brain. In it are given clear descriptions of the tumors, the symptoms to which they may give rise and their treatment. This statement made by the author is deserving of frequent and emphatic repetition: "The great secret in operating on a brain tumor lies in knowing where to terminate the attempt at removal of the tumor and when to rest content with a pure decompression." So long as exploration of the brain substance is resorted to, so long will the mortality remain high. The chapter on technic is well written and reviews that phase of the subject thoroughly. The text is not verbose, in fact, the style is rather terse but none the less instructive. The illustrations are good.

Pathology. A Manual for Teachers and Students. By W. T. Councilman, M.D., Shattuck Professor of Pathology, Harvard Medical School. Cloth. Price, $4.50. Pp. 405. Boston: W. M. Leonard, 1912.

This book is an enlarged syllabus and is to be used as a teaching accessory. It outlines the plan which has been followed in teaching pathology in the Harvard Medical School. It contains no illustrations. Blank leaves on which students may make notes and drawings of specimens are inserted liberally after the various chapters. As with every syllabus, extensive supplemental reading is necessary. Protocols of autopsies are appended to many chapters. The book is practically a laboratory manual.

Medicolegal

Liability for Negligence in Making Diagnoses—Patients Entitled to Thorough Examinations and Proper Instructions—Results and Damages

(Rogers vs. Kee (Mich.), 137 N. W. R. 260)

The Supreme Court of Michigan affirms a judgment for $1,000 damages in favor of the plaintiff for alleged malpractice on the part of the defendant in neglecting to properly diagnose a fracture of the neck of the left femur, when professionally called to attend the plaintiff, and for unskillful and negligent treatment of the same. The court says that at the time of his injury the plaintiff was 55 years of age and a saw filer by trade. While lifting a circular saw weighing from 130 to 140 pounds, and turning to carry it, he felt something give way in his hip, causing him to drop the saw. He soon resumed his work, continuing during the balance of the day, mostly in a sitting posture, and walked home at night on an earth path, a distance of about half a mile, by the aid of sticks used as canes. He continued at his usual work the next day, which was Saturday, and the following Monday walking to and from the same with some difficulty, using canes, sometimes receiving assistance from others. On Monday evening his condition was such that he called the defendant to attend him professionally, the defendant being a regular physician retained by the mill company for which the plaintiff worked, to professionally care for its employees.

The testimony was in conflict as to much of what was claimed to have occurred during that and subsequent visits. The defendant testified that he found no symptoms of a fracture of the femur; that, if there had been any fracture or dislocation of the hip, he made such an examination as would have disclosed it; that from his examination and the history of the transaction communicated to him by the plaintiff and his wife he diagnosed the case as sciatica, and prescribed therefor the application of a mustard plaster; that he did not think the plaintiff's condition was caused by what occurred at the mill; that on visiting the patient the following day the defendant reached the conclusion from his statement that he then had no pain, that the trouble was not sciatica, but more probably paralysis; that he ordered the plaintiff to rub the muscles, but gave him no further treatment at that time because there was nothing further to do except to wait for developments; that he continued his visits for nearly a month, and was still uncertain what ailed the plaintiff, but thought he had some spinal trouble and suggestions of locomotor ataxia; that the plaintiff was able to be up and around and walk, though with some difficulty; that he furnished him crutches on which he later visited the defendant at his office.

After the defendant ceased his visits, or about two months after the injury, the plaintiff consulted another physician, who diagnosed the case and found him suffering from a fracture of the neck of the femur, and dislocation which had not been reduced, and which had existed for some time, a fibrous union having developed. The limb was shortened over two inches, and could be projected backward and forward but not sidewise. Various other physicians, who subsequently examined the plaintiff and testified as experts in the case, confirmed this diagnosis and a statement as to the importance of prompt attention to such cases, and the hopelessness of successful treatment after the lapse of any considerable length of time.

There was not only an abundance of testimony to justify the court in leaving to the jury the question as to whether the plaintiff was suffering from a fracture of the neck of the femur at the time the defendant first visited him professionally, and the fact that he was being established, there was also abundant evidence to go before the jury on the issue of the defendant's negligence in failing to properly diagnose and treat the case, for, on the assumption that the plaintiff was suffering from the fracture, as stated, when the defendant first visited him professionally, the testimony of the physicians called as experts by both sides as to what he could and should have discovered and done was sufficient to raise an issue of fact as to the defendant's negligence in failing to properly examine, diagnose and discover the fracture, in directing the patient to walk and move the broken limb instead of keeping it quiet in one position, to aid a bony union, and in not informing him as to the nature of the injury, so he would be advised and could cooperate with his physician understandingly in the treatment given.

The law is well settled that a patient who employs a physician is entitled to a thorough and careful examination, such as the condition of the patient and circumstances will permit with such diligence and methods of diagnosis for discovering the nature of the ailment as are usually approved and practiced by medical men of ordinary learning, judgment and skill, in similar localities. If, by the exercise of such care and skill, the fracture would have been discovered, a failure to properly diagnose is negligence; and it is the duty of a physician, in taking charge of a case where there is a broken limb, to inform and instruct the patient as to his conduct and what caution should be observed in moving or using the limb while it is being treated.

The serious proposition urged and argued by the defendant's counsel was this: Assuming that the defendant did or omitted to do all that was claimed by the plaintiff, and conceding that the testimony would support the jury in so finding, there was no proof that the plaintiff suffered any injury as a result; the testimony, on the contrary, showing as good a recovery as ordinarily obtains under skillful treatment with a patient of the plaintiff's age following a fracture of the neck of the femur. That the correct treatment and probable results were scientific questions is undoubted, and the law seems well settled that malpractice must be substantiated by the testimony of expert witnesses in order to prevail, it being proper for other witnesses to testify as to the treatment and acts of the defendant, and the province of experts, physicians and surgeons to say whether or not the same was proper and the proper results. But it was the defendant's own testimony that he did not diagnose the case as a fractured femur, that such condition did not exist, and he gave no treatment for such an injury. As a result the questions for the experts resolved themselves largely into the difference between proper treatment and no treatment at all. The allegations related to offenses of omission rather than commission. The court thinks, however, that there was testimony from which injury to some extent might be inferred from the treatment given. The defendant diagnosed the trouble successively as sciatica paralysis and locomotor ataxia. So far as he administered any treatment, it was for those maladies. He directed the application of a mustard plaster, and later massage and rubbing the injured hip with a liniment. The plaintiff testified that this was very painful. Pain and suffering from a wrong treatment are an element of damage. He directed the plaintiff to walk and exercise the limb. Portions of his own testimony indicated that this would be injurious and contrary to a proper treatment.

The testimony given by the various physicians relative to the proper treatment of such an injury imported clearly that a patient suffering from such an injury on calling a physician is entitled to approved methods of treatment from which experience of the profession indicates beneficial results are probable and to be anticipated, and, if not an entire recovery, a better ultimate condition than if left to chance. If so, can it not be legitimately inferred by a jury that, the plaintiff, a strong man, who untreated and with his recovery left to chance, "shows as good results as would ordinarily obtain in a patient of his age under skillful treatment," if properly and skilfully treated would, in all probability, have a better recovery and be in yet better condition? The court thinks such testimony presents an issue of fact for the jury—on probability, it is true. The issues of sickness and healing life and death, are too uncertain to be otherwise forecast, but negligence which deprives a man of such probability is more than injury without damage.

What would constitute an injury to the plaintiff in an action like the present has been thus defined: "Any want of the proper skill or care which diminishes the chances of the patient's recovery, prolongs his illness, increases his suffering, or, in short, makes his condition worse than it would have been if due skill and care had been used, would, in a legal sense, constitute injury." *Craig vs. Chambers*, 17 Ohio St. 253. Until the learned experts testify that no treatment would avail or be beneficial, that no better results are probable with treatment than without—in other words, that a physician is useless in such a case—the court thinks that such facts as were shown in this case present an issue for the jury.

Admissibility and Weight of Evidence in Action for Services in Another State Met by Charge of Malpractice

(Feingold vs. Lefkovitz (Tex.), 147 S. W. R. 346)

The Court of Civil Appeals of Texas reverses a judgment rendered for the defendant and remands for a new trial this case brought by the plaintiff to recover $99 for professional services as a physician, rendered in the city of Chicago, Ill. to an infant child of the defendant, and $5 paid for a microscopic examination for the account of the defendant. The court says that the plaintiff was a regularly licensed and practicing physician, and was called in by the defendant to treat the child, and the evidence raised no issue as to the reasonableness of the charges made; but it was contended that the treatment given the child was not proper, and that the plaintiff was incompetent, negligent, and guilty of malpractice and unskillfulness in his treatment. The testimony of the plaintiff and of another physician, however, made a prima facie case, and showed that the treatment given was necessary and proper; that the plaintiff was competent, and guilty of no negligence, malpractice, or unskillfulness.

It was true that the testimony of the plaintiff was contradicted in certain respects by the defendant and his wife; but those contradictions were not on the material issues in the case, and, assuming the truth of the testimony of the defendant and his wife as to those disputed matters, they did not support a finding that the treatment was unnecessary or improper, or of any negligence, malpractice, unskillfulness, or incompetency on the part of the plaintiff. At best, the testimony of the defendant and his wife would no more than suggest a surmise or conjecture of improper treatment. It was true the defendant stated that the plaintiff was an incompetent physician; but that was plainly only an opinion of his own on a subject of which he was in no wise shown to have any knowledge. That the plaintiff was not qualified, or that his treatment was negligent or unskillful, must have been shown by some competent evidence, in order to sustain a verdict in favor of the defendant; and it must not be based on surmise or conjecture, or supported merely by the opinion of the defendant of incompetency, when it was manifest that such opinion was of no value. As to the item of $5 paid for microscopic examination, there was a conflict in the testimony as to whether or not the examination was authorized by the defendant; and if he did not authorize it he would not be liable for it.

The question of whether or not the plaintiff had complied with the laws of the state of Illinois and was authorized to practice medicine in that state should not have been submitted to the jury for their determination if the facts in regard thereto were undisputed; while, if there was any dispute, the court should have informed the jury what was required by the laws of the state of Illinois, in order that they might determine from the facts before them whether or not the plaintiff had complied with those laws. But there was no error in excluding a copy of the plaintiff's license to practice medicine when the failure to produce the original was not satisfactorily explained. Neither did the court err in excluding a certificate of the county clerk of Cook county, Ill., to the effect that the plaintiff had registered his license in that office. At any rate the exclusion of the license and certificate was immaterial, in view of the fact that the plaintiff was permitted to testify, without objection, that he was a regularly licensed and practicing physician.

Case Properly Presented under Medical Practice Act

(Stiles vs. State (Tex.), 148 S. W. R. 326)

The Court of Criminal Appeals of Texas affirms a conviction of unlawfully practicing medicine without a certificate from the State Medical Board, or a diploma from some accredited medical college, etc. The court says that this prosecution was not had under Article 750 of the penal code, which was Section 4 of the Act of 1907, making it unlawful for a person to practice medicine without registering a certificate or license with the district clerk of the county of his residence, but it was under Articles 751 to 756, inclusive, which are, respectively, Sections 5, 6, 7, 10, 13 and 14 of the act of 1907, and which require each person, before practicing, to get a license or have a diploma. Consequently it was not necessary for the information to allege the county of the defendant's residence, and that she had not registered her certificate or license in the district clerk's office of such county of her residence, as certain cases hold is essential when the prosecution is under Article 750. Nor was there error in the charge of the court in that it authorized a conviction on transactions occurring prior to September 1, 1911. It was true that the state could have carved out the first and second days of September as the days on which the offense was committed, as each day was a separate offense, and, if the allegations in the information had charged that the offense was committed on the particular date of September 1, and no other, then the proof and charge should have been so limited; but, instead of carving for said date of September 1, 1911, or any other specific time, it embraced the whole of the period on and prior to September 1, 1911, to within the period of limitation. All this was to the defendant's advantage, and not her disadvantage, for, if convicted, as she was, and the proof embraced a period of from the early summer of 1911 up to and including September 1, 1911, that conviction would be a bar to any and all other offenses in that county for any time within such period.

Liability of Employers for Injuries from X-Rays Applied on Their Demand

(Jones vs. Tri-State Telephone and Telegraph Co. (Minn.), 136 N. W. R. 741)

The Supreme Court of Minnesota affirms a judgment for damages for personal injuries alleged to have been sustained by the plaintiff in being exposed to x-rays by a physician employed by the defendant, which wanted the picture for its own purposes, probably as evidence in case the plaintiff should bring suit against it to recover for the injury received in an accident. The court says that the somewhat unusual facts were that the plaintiff received an injury while in the employ of the defendant as a lineman. A physician was called who diagnosed the case as a displacement of the sacro-iliac joint, and used heroic treatment that was claimed to have resulted in forcing the joint into place. The plaintiff was making good progress toward recovery, when the general manager of the defendant requested him to submit to an x-ray picture being taken. The plaintiff opposed this, expressing his fear of injurious consequences, assuring the defendant's manager he was all right, and offering to release the defendant from all claims for damages on account of the injury. The plaintiff's physician also opposed the taking of the x-ray picture. But the manager guaranteed that the taking of the picture would not injure the plaintiff, and threatened to discharge him if he refused to submit. After a good deal of hesitation and resistance, the plaintiff finally consented that the picture might be taken, and he was taken by defendant's manager to the office of the physician employed by the defendant for the purpose of taking the picture, who applied the x-ray over the abdomen for the purpose of taking a picture of the sacro-iliac joint. The plaintiff testified that the current was left turned on for more than seven minutes, claiming to have received a severe burning of the tissues by the application of the x-ray, and, as a result, to be suffering from paralysis of the bowels.

The relation of physician and patient did not exist between the physician who made the application of the x-ray and the plaintiff. The physician was the servant of the defendant. The case was the same, therefore, as if the defendant's manager, or any other agent or employee, had inflicted the injury, and the rule of respondent superior, or let the master answer, applied, rather than the law relative to the liability of a physician or surgeon to his patient, or to the liability of a master who employs a physician to treat his servant.

It is quite clear to the court that it was a case for the jury. It was not necessary to determine the effect of the manager's guarantee of safety on the liability of the defendant. The instrumentality was under the exclusive control of the defendant, and there was sufficient evidence that injury to the subject was not a necessary result of the taking of an x-ray picture, if proper instrumentalities and proper care were used. Certainly the court cannot say that the plaintiff's injuries were not the result of the exposure. These facts were enough to make the case one of res ipsa loquitur, or the matter speaks for itself, and to make the burden on the defendant to show that there was no negligence. The defendant did not show this, at least conclusively. Indeed, there was sufficient evidence of negligence, even without the res ipsa rule, to make a case for the jury.

Society Proceedings

COMING MEETINGS

American Medical Association, Minneapolis, June 17-20

American Academy of Medicine, Minneapolis, June 13-15.
American Proctologic Society, Minneapolis, June 16-17.
Conf. of State and Prov. Boards, St. Paul, June 13-14.
Maine Medical Association, Portland, July 2-3.
North Carolina State Medical Society, Morehead City, June 17.
Washington State Medical Association, Everett, July 14.

AMERICAN NEUROLOGICAL ASSOCIATION

Thirty-Ninth Annual Meeting, held at Washington, D. C.
May 5-7, 1913

(Concluded from page 1819)

Giant Tumors of the Conus and Cauda Equina

Drs. Joseph Collins and Charles A. Elsberg, New York: The patient begins to complain of pain and stiffness in the back, extending down the posterior aspect of one and then of the other thigh. The pain is intermittent at first, and later is continuous. After the expiration of a year or more, the symptoms become worse; single or double drop-foot appears, the lower limbs become weaker and stiffer, and knee- and ankle-jerks disappear. Then follow difficulties in the functions of the bladder and rectum, irregular sensory loss, rigidity of the lumbar vertebral column and tenderness of the lumbar spines. Peroneal palsies are regularly found with electrical changes. The patients are often suspected of tabes, and have usually been treated for long periods for sciatica. The important features of the clinical histories were the following: A history of one or more years' duration; pain in the small of the back sooner or later extending down one and then the other extremity; stiffness of the back in the lumbar region; increasing weakness and stiffness of the lower extremities with loss of power of dorsal flexion of the foot, and slight disturbances of the bladder and rectum. The important features of the clinical examination were the following: rigidity of the lumbar vertebral column; weakness and stiffness of the lower limbs; paralysis of the peroneal groups of muscles and sometimes of the tibialis anticus group; drop-foot on one or both sides; absence of knee- and ankle-jerks; tenderness of the lower lumbar spines; irregular and unsymmetric sensory disturbances; lumbar puncture usually negative, no fluid obtained, Wassermann test and roentgenogram negative. The typical findings at operation consisted of a large reddish-brown non-vascular tumor within the dura, which filled up the entire lower part of the spinal canal, surrounded the roots of the cauda equina and extended upward on the conus, with which it was not closely connected. The growth is not intimately connected with the inner surface of the dura, and can be easily freed from it, after which the inner surface of the dura is found to be smooth and glistening. The growths are well encapsulated above, but are closely connected with the nerve-roots below. The peculiar features of the tumors are their large size, the late appearance of bladder and rectal disturbances, the relatively small amount of sensory loss in spite of the fact that the tumors fill up the entire lower part of the spinal canal, and the benign course of the disease, without tendency to perforate the dura. Operative interference should be done in two stages by the "extrusion" method. If the cases are recognized early, radical removal of the growths should be possible.

DISCUSSION

Dr. Archibald Church, Chicago: I am reminded by Dr. Knapp's paper of an interesting experience of comparatively recent date; the recurrence of three tumors followed by three successful operations in the same patient. The first tumor made its appearance four years ago. At the end of a year the patient was entirely paraplegic. Dr. H. T. Patrick saw the case in consultation. Dr. J. B. Murphy operated. A tumor was removed from the cervical region. The patient made an uneventful recovery and in the course of six months she recovered. At the end of two years she began to have the same symptoms of spinal tumor and within six months had developed the same symptoms. A second operation found another growth in connection with the pia about one inch lower than the first tumor. Whether this was a recurrence of the first growth we did not know. It was supposed to be essentially an independent neoplasm. For nine months she had comparative freedom. Two weeks ago she came back to Chicago for recurrence. Early last week a third operation was done and a third tumor removed. So we had one on the right, one on the front and one on the left. I have had two cases of cauda equina tumor. About eight years ago a surgical friend had the typical manifestations of caudal lesion. This endotheliomatous growth filled the entire neural cavity and was supposed to be so intimately related to the cord that no attempt was made to remove it. The man perished from kidney trouble. About three years ago I saw a young boy with terrible pains in the legs who had been treated for hysteria. After many months of observation he showed a little area of sensory loss corresponding to the cauda, and on this comparatively slight symptom, although the bladder was not materially affected, an operation was done and an infiltrating endotheliomatous neoplasm extending from the middle of the lumbar spine to the lower end of the sacral canal was uncovered. It was not considered feasible to remove it and safest to let the case take its course. The operation wound has remained perfectly solid. The symptoms have not increased, but a tremendous growth has invaded the abdomen, giving the appearance of a six months' pregnancy. Apparently the pressure has been relieved from the caudal region so that further neural symptoms are inhibited, and the growth has gone in the anterior direction. This large caudal involvement may be more frequent than we suppose.

Dr. W. M. Leszynsky, New York: The mere fact that one cannot obtain cerebrospinal fluid should lead to a differential diagnosis between tumors of the cauda equina and inflammation of the roots.

Dr. William G. Spiller, Philadelphia: This subject of the root neuritis confined to the lower portion of the cord is one of great interest. One cannot help wondering whether in this case there was a meningitis of a certain degree, possibly of a considerable degree, and whether the root changes were not part of this meningitis. Dr. Elsberg said that the cord showed nothing to the naked eye. There may be marked meningitis which is not to be detected by naked eye at all. Tumors vary greatly according to whether they are in the upper part of the cord or in the lower. In the upper they are more of the type of fibroma and endothelioma, well-defined tumors that may readily be removed in most cases.

In the lower part of the cord they are much more malignant, infiltrating, liable to be of greater size and *offering* much more unfavorable conditions for removal. In one case of inoperable tumor I had Dr. Martin cut the anterolateral columns to remove the pain. It was very successful. The patient lived two years after that operation. He died a few months ago, with an enormous tumor filling a large part of the abdomen.

Dr. Joseph Collins, New York: It seems useless so far as the patient's restoration to a degree of health and usefulness is concerned to operate on patients with these caudal tumors as they are now being operated on, my experience being that it does not give them any considerable degree of life and does not restore them to any degree of health. The significance of this fact is that we must diagnosticate these cases earlier than we do now. If we rely on the presence or absence of the cerebrospinal fluid in a case that has the symptoms of caudal tumor in making the differential diagnosis, we shall go wrong frequently. I would make a plea for operation on these patients in every instance at the time when suspicion enters our mind that caudal tumors are present, and, second, for operation on patients with tumors of the conus five, six, eight, ten years before the time they are now operated on.

Pathology of Myasthenia Gravis

Dr. Sidney Kuh and Dr. Morris Braude, Chicago: We had a typical case of myasthenia gravis in a physician aged 50, of about five years' duration. Examination of the nervous system was made with the Weigert myelin sheath stain and Pal's modification of this, Mallory's chlorid of iron hematoxylin, Ford-Robertson's toluidin blue, thionin, Nissl's methylene blue, toluidin blue counterstained with erythrosin, uranium carmin, Van Gleason's stain, Weigert's fibrin stain and Weigert's stain for elastic fibers, on about 400 sections. Small areas of vascular sclerosis, recent (agonal?) hemorrhages, increase in glia tissue and corpora amylacea were found in the spinal cord. In the cervical region there was an aberrant bundle of fibers. In the higher levels of the cord capillary polymorphonuclear thrombi and chromatolysic and pigmentary changes were seen in the nerve cells. The relative intensity of the later findings remained approximately constant; that is, where the thrombi were numerous the changes in the nerve cells were greater. The same was applied to the medulla and corpora quadrigemina. In the cortex but few of these changes were to be seen; more in the optic thalami. The muscles showed nothing that had not previously been described. No trace of the thymus was found.

Bilateral Oculomotorius Palsy from Softening in Each Oculomotorius Nucleus

Dr. William G. Spiller, Philadelphia, reported a case in which the chief features were bilateral oculomotorius palsy developing in an apoplectic attack, syphilitic in origin, implicating every muscle supplied by the oculomotorius in each eye, resulting from bilateral softening as two separate lesions confined to the nuclei of these nerves; without implication of other cranial nerves except the opticus, and without other symptoms except preceding mental disturbance, convulsions and some change in the patellar reflexes and succeeding extension of each big toe from plantar irritation. The several symptom-complexes resulting from vascular occlusions which he had studied, namely the occlusions of the posterior inferior cerebellar artery, of the uppermost portion of the anterior spinal and adjoining portion of the vertebral arteries, of the cervical anterior median spinal artery, of the vessels supplying the inner segment of each lenticular nucleus, and (in the case reported in this paper) of occlusion of the vessels to the oculomotorius nuclei were discussed. In the last-mentioned condition there are symmetrical softening and paralysis of all branches of the oculomotorius, although the paralysis may not be complete in all the muscles innervated by the nerve: there are also involuntary incoordinate movements and great rigidity with unconsciousness at the onset of the attack.

Early Perimetric Deviations Accompanying Hypophysis Lesions

Dr. Harvey Cushing, Boston: A temporal hemianopsia as commonly recognized is merely a stage in the progress of the visual field defect associated with a growth originating near the chiasm, even when produced by a retrochiasmal lesion, which affects both temporal rather than homonymous fields. It is comparatively unusual to see patients in the stage of bitemporal hemianopsia with a vertical meridian separating blind from seeing halves. It is of clinical importance, therefore, that the preliminary stages in the process be recognized.

Lesions of the Hypophysis and of the Uncinate Region

Dr. Charles K. Mills and Williams B. Cadwalader, Philadelphia: Of eight cases seen by us one had presented uncinate without pituitary symptoms, necropsy in this case showing a large tumor involving the uncinate convolution, but extending into other regions of the cortex and subcortex. Of the other seven cases, three presented both pituitary and uncinate phenomena of a decided character. In the other four uncinate symptoms were absent, pituitary phenomena being pronounced. These phenomena, however, were of a mixed character, illustrating dyspituitarism rather than either hypopituitarism or hyperpituitarism. In one of the cases with decided uncinate symptoms no lesion of the temporal lobe was discoverable. In one case in which the patient died after operation, a necropsy showed a tumor involving the infundibulum and pineal gland and adjoining structures. In three of the cases in which operation was performed, pathologic conditions of the hypophysis were found at the operation and confirmed by microscopic examinations of parts of the tissue removed. We are favorable to the fronto-orbital operation of Dr. Frazier for the exposure of the hypophysis. We believe that it has distinct advantages over that of approach by the nasal route. *Only operation, however, gives successful results in a limited number of cases.*

DISCUSSION

Dr. J. Ramsay Hunt, New York: Recently I saw a case of pituitary disease in which there were no changes in the sella turcica. The man was placed on pituitary extract for two or three weeks. He returned to the hospital saying that he had been seized quite suddenly with blindness. The blindness, it seems, had something to do with the acromegalic signs.

Dr. Harvey Cushing, Boston: I have seen many cases of scotoma, and these scotomas, as de Schweinitz has pointed out, are apt to occur in the upper outer quadrant. They are largely due to the fact that there is apt to be fluctuation of these symptoms. The gland swells against the chiasm, which accounts for the loss of vision in the upper and outer quadrant. In cases which have passed beyond the stage to be cured by operation I would limit myself to a minor measure such as the mere relief of pressure rather than a large major operation such as the exposure of these structures through the frontal region. Such a lesion as a cyst is, of course, easily approached from below. The duration of the stay of the patient in the hospital from operation by the transsphenoidal route is comparatively a few days. It is not much more than a submucous resection of the septum, which the laryngologist not infrequently practices in the outpatient department. There have been 104 patients in my series and there have been 75 surgical cases. In 46 of the 75 the transsphenoidal operation has been done, in 22, subtemporal decompressions, and 8 have had transsphenoidal and temporal decompressions, so that there have been 93 operations. There have been 9 fatalities, about 10 per cent. Most of these fatalities occurred in the early series. Thus most of these fatalities were in cases which to-day we should recognize as inoperable or would adopt a simple measure. Two were simple subtemporal decompressions with very large tumors. I think that the operation merely takes part of the growth. It is inconceivable that one can remove the entire growth. If the growth is accessible from below I think it should be approached from below. What we want to do is to make room for enlargement of the growth. We cannot remove it entirely. I feel that this measure to which Dr. Frazier has again called attention, which was first advocated by Hartley and subsequently by Krause, is in Dr. Frazier's skilful hands a measure that likely can often do good; but it is one which I should not like to see come into general use.

Huntington's Chorea: A Study in Heredity

Drs. Smith Ely Jelliffe, Elizabeth B. Muncey and C. B. Davenport, New York: In the last ten or twelve years we have been able to gather enough information to show that one could group these cases of Huntington's chorea into four large groups. This confirms the statement frequently made that Huntington's chorea does not skip a generation. Once the line of descent is free, always free. If one individual does not have the disease it means that he does not have it in his germ cells and hence cannot transmit it. The practical application of this rule to eugenics is diminished by the fact that Huntington's chorea does not come on until late in life. As to marrying, each member feels that he may escape, and if he considers the matter at all runs the chance. In a person whose onset is relatively late in life it is to be expected that the parents will often die before the disease is due to develop in them. In certain of the families one will find the cropping out of the Huntington chorea with nothing in the antecedent heredity, and later it turns out that there was illegitimacy, which occasionally comes into these charts to explain the law of mendelian dominance.

The Value of Roentgenoscopy of the Gastro-Intestinal Tract in Some Types of So-Called Functional Nervous Disorders

Dr. L. Pierce Clark and Dr. Archibald H. Busby, New York, reported that in a careful and complete roentgen analysis of eight cases of idiopathic epilepsy associated with severe gastro-intestinal disorder they found some form of abnormal position of the viscera (ptosis) which they judged to be pathologic in each case and which they connected with some of the clinical symptoms in the individual case. They outlined a system of physical therapeutics to overcome the gastro-intestinal ptosis which had been of functional benefit. They advised a routine roentgenoscopy in every case of genuine epilepsy with severe indigestion as an aid in exact diagnosis and treatment of the indigestion and the convulsive disorder itself.

DISCUSSION

Dr. D. J. McCarthy, Philadelphia: I can support what Dr. Clark has said in his paper from an extensive study of the past year on not only this group of cases but also the entire group of functional cases that come to the neurologist's office. Whenever there has been any suspicion of gastro-intestinal involvement, I have had skiagrams made. The percentage of cases of what has been considered the purely functional neuroses in which lesions are found not only equal to those shown in Dr. Clark's group of cases, but even more intense, is surprising. Uniformly excellent results have been obtained from operation in those cases which have been well selected.

Dr. Herman H. Hoppe, Cincinnati: I believe that, while the study of this condition is very interesting, before the profession can come to any conclusion as to the therapeutic results a larger number of cases must be studied. On the part of a great many patients there is an objection to having an operation of a serious character done for a primary condition that has existed for a long time. Some practitioners have found the straight-front corset to answer nearly all purposes. One case of epilepsy occurs to me as presenting complete recovery following operation.

Dr. C. A. L. Reed, Cincinnati: I have had some very satisfactory results following surgical restoration of these displacements. It is no more possible to reduce these displacements by medicines than it is to reduce a dislocated elbow with a dose of pills. I have not infrequently applied bandages, trusses, etc., with benefit, temporary or partial. But that medical treatment can by any possibility restore the patient to normal condition is something not for a moment believable.

NEW YORK ACADEMY OF MEDICINE

Meeting held May 15, 1913

The President, **Dr. William M. Polk**, in the Chair

The Cancer Research Institute

Prof. J. G. Adami, Montreal: The primary object of cancer research is the discovery of the means whereby humanity may be protected against cancer. There are two methods of attacking the problem, direct and indirect. Of the former Ehrlich has afforded a demonstration in his discovery of salvarsan. This method of research may be most laborious, hundreds of compounds having to be devised, tested and rejected, but it is a reasonable expectation that gradually certain groups of radicals will be encountered presenting definite specific action on one or another phase of the particular morbid process, and that eventually some permutations or combination of such substance or substances will be discovered which will definitely destroy the causative agent within the tissues, or arrest the morbid process without coincident grave injury to the tissues of the individual. This method is being followed by Wassermann and his coadjutors. It is a purely therapeutic method, even if at the same time purely experimental.

Scientific medicine has scored its most noted successes by means of the indirect method. The treatment and control of tuberculosis, diphtheria and other infections during the past thirty years dates from the moment at which the causative agents were determined, or, as in yellow fever, from the time when, through the employment of rigid analogy, the nature of the disease becomes realized; that is, the detection of the cause throws light on the mode of prevention of an allied disease. The indirect method is the one through which ideal cancer research must approach the solution of the problem by investigation into the nature of the process of normal tissue growth, into the life history of malignant growths and into the causes of neoplasm.

Admitting that an institute along these lines would be the better, and also admitting that despite the labors of a generation of investigators the cause of cancer is still undetermined how are we to proceed? The energies of the institute must not be devoted to immediate endeavors to determine the cause, but the position has to be invested from all sides and thoroughly undermined. It is better for an institute to concentrate on one line of attack, though this requires no little strength of mind with the full knowledge that it may possibly turn out to be futile. Cancer research to be well conducted necessitates heavy expenditure, so heavy that the institute is most likely to be of service if it takes up one or at most two lines of work. An instance of such concentration of effort is the work of the Imperial Institute for Cancer Research in London and of the Ehrlich Laboratory. If Dr. Gaylor and his associates have failed to discover the causative agent of cancer, they certainly have done yeoman service by the methods of exclusion. As a result of such work we have a much fuller knowledge of many aspects of the problem than we had ten years ago. We are now in a position to direct our efforts far more methodically and more serviceably than at any previous period. If, however, there were abundant funds, the ideal institute would be in such a center as this where there are abundant research workers in the various branches of biology and where experts of all orders may be gathered to make a combined attack from many sides. The plan outlined by Columbia College under the Crocker bequest seems to me admirable. My ideal of a cancer research in a great wealthy city is a combination of an institute as termed at Harvard a "commission." There must be a central institute or administration containing a library with all modern literature bearing on cancer research, a director's office and a suite of laboratories and animal rooms for the use of those making investigations under the immediate direction of the head of the institute. There should be a conference chamber, for informal conferences have a great value. It is by combined effort that success is most likely to be attained. The development of this *esprit de corps* depends essentially on the influence of the head of the institute.

A desideratum of equal value is a hospital or certain wards in a hospital already existing. Failing this, there is danger that the work will become too academic, too remote from practical needs. In hospitals which afford treatment for needy patients, it must be laid down that in return families must consent in the case of death to a post-mortem examination. Beyond these two control sections there is no need to duplicate laboratories of physiology, cytology, general biology, pharmacology and experimental therapeutics. Make the heads of the laboratories, members of the executive department of the institute and develop the spirit of cooperation so that there may be free consultation between the members of the executive department. Let these laboratories be thrown open to those willing and anxious to conduct investigations along any particular line under the direction of the head of each laboratory, the maintenance of the investigators and the cost of the investigation being paid by the institute. Let the work thus done be brought together and focused by the periodical conferences already referred to. All this depends on the spirit in which the work is entered into and, above all things, on the spirit and enthusiasm of the director.

Cancer Statistics

Prof. W. F. Wilcox, Ithaca, N. Y.: A summary of the arguments of Messrs. King and Newholme in their paper written in 1893 supporting the conclusion that "the increase in cancer is only apparent and not real" outlines the objections that have been raised to this conclusion and calls attention to the large body of new evidence on the subject which has accumulated in the intervening twenty years, especially that to be found in the international summaries published by the French government in 1907 and by the Amsterdam statistical bureau in 1911-1912 and in the annual mortality statistics of the registration area of the United States, 1900-1911. After an analysis of this and other evidence it may be concluded that probably the larger part and possibly all of the increase in the mortality from cancer is apparent rather than real. Those who doubt this conclusion and hold that most of the increase is real may interpret the evidence as showing that the real increase is not at a geometrical or even an arithmetical rate but diminishes as the death-rate from cancer rises and that, perhaps, in certain limited areas like Switzerland and a few cities, it is already approaching its maximum.

Public Education in Cancer

Dr. Willy Meyer, New York: What is the cause of cancer? This question certainly has some bearing on the subject of the public education in cancer. Pathologists in discussing this problem are absolutely opposed to the theory of cancer being due to a parasite or a micro-organism, whereas many general surgeons have by direct observation come to this conclusion. Plain logical thinking in the examination of patients could hardly make one think otherwise than that the cause of cancer is a living organism. The public should be taught that real progress in the cure of cancer can be made much faster after the cause of cancer has been found, just as great progress in our knowledge of tuberculosis has been made since the demonstration of the tubercle bacillus of Koch, and in syphilis after the discovery of the *Spirochaeta pallida*. The great trouble with reference to cancer is that there is not sufficient money, no large endowment fund available in every country in the world. If millions of dollars were available for this work on cancer there is no doubt but that rapid progress would be made in learning the cause of cancer.

Is cancer infectious, or contagious, or both? It does not appear that cancer can be conveyed from one person to another, as from husband to wife or from patient to nurse, and therefore the disease cannot be considered infectious. In one instance, however, I operated on a husband for papilloma of the bladder and later the disease recurred and involved the prostate. While treating this patient I was called to examine his wife and found her suffering from cancer of the cervix uteri.

Is cancer curable? This question is always primarily in the patient's mind. Cancer is curable by the surgeon's knife if the growth is removed radically at an early stage. The whole question resolves itself into early diagnosis and early operation. We all know the clinical development of the three stages: (*a*) when cancer is entirely a local disease; (*b*) when it is still a local disease with regionary lymph-nodes involved, and (*c*) when there are metastases. Undergraduates as well as postgraduates should be taught the importance of early diagnosis and should bear in mind certain symptoms that make these cases suspicious. Blood in the urine, blood from the rectum, or blood from the vagina after the menopause should excite suspicion and call for a thorough examination. The symptoms of cancer of the esophagus are most benign. The patient comes early to the physician because of difficulty in swallowing. The fluoroscope, the Roentgen ray and esophagoscopy, in the diagnosis of cancer of the esophagus, are valuable adjuncts and should be used without delay. The public should be taught these early signs of cancer. There are various associations which have taken this matter in hand. According to the laws of medical ethics it is hardly permissible for a doctor to write for weekly or monthly magazines, much less for the daily papers, in order to educate the public, but it is a splendid idea and possible for a man like Samuel Hopkins Adams to publish in *Collier's Weekly* articles which tend to educate the public regarding cancer. It is to be hoped that by publicity the same results which have been achieved with those afflicted with tuberculosis may be obtained in patients afflicted with cancer.

DISCUSSION

Dr. Robert Abbe, New York: In spite of the greater number of cancer patients presenting themselves to the surgeon, the memory of the large surgical clinics of thirty or forty years ago recalls about the same proportion of cancer cases as at present. It must be the work of cancer research to study the cause more than the treatment of cancer. I have worked more along the line of treatment, especially local treatment. The remark of Dr. Meyer that the tendency now is to regard the causation as microbic does not agree with my observation. Ninety-five per cent. of breast tumors are disorders of the glandular structure of the breast and wholly unlike the other conditions, syphilis, tuberculosis and actinomycosis. In addition one sees that Dr. Carrel's growth of cells *in vitro* carrying on generation after generation of cell development in culture-tubes, demonstrates that living cells are not microbes though they may act like them. A further and very strong argument against the microbic origin of cancer is the fact that radium has a powerful influence on cancer cells, but not through its bactericidal action. The alpha rays are strongly bactericidal but the gamma rays are not so. The alpha rays are destructive only of tissue brought in intimate contact with them, while the beta rays are stimulating and only the gamma rays are efficient in causing retrograde changes in malignant cells. Hence, one must admit that cancers destroyed by radium when no access of alpha rays is permitted are altered by the non-bactericidal gamma rays which entirely alter their life course and render them inert and atrophied. The effects of radium rays on seeds whose vital force may be justly compared to that of animal cells, demonstrates that seeds kept for a while close to radium are killed, those at a slight distance are stimulated, and at a greater range they are devitalized and grow with less and less vigor up to a certain distance in comparison with unradiumized seeds planted under similar conditions. This coincides with the results seen in tumors. The failures of radium to cure certain tumors urges on the study of cause and effect. It is evident that the use of small or weak doses of radium has been inefficient, because of lack of knowledge of filtration to obtain the more competent penetrating gamma rays in massive doses. The cure by radium is not brought about by any action like cautery or caustic, but by restoring to the aberrant cell growth some lost power of self control restoring it to normal line of growth. It seems that even with the small amount of radium available to the surgeon, the progress already made to apply this subtle and unique power gives promise of increasing future value.

Dr. Greenough, Harvard Cancer Research: The public and the general practitioner must be educated and made to understand the meaning of early symptoms which point to cancer. I operated on a patient aged 37 who had a cancer of the breast which she had noticed eight months before consulting me. It was not painful, but she was concerned because of its presence. She went to a general practitioner for advice and he said, "Does it pain you?" She replied that it did not, and he said, "Let it alone until it does bother you." After a period of six months the tumor began to bother her and again she consulted a physician who informed her that it was very suspicious and that she should have it removed. The tumor was removed and the pathologist reported that it was cancer. I believe in educating the public, especially along the lines of the early symptoms of cancers of the stomach, nephromas, etc., and to consult a physician without fail whenever a tumor is noted.

Resolution

The following resolution was carried:

Whereas, A movement has been started in New York City to educate the people at large on the subject of cancer, and,

Whereas, Sufficient influence in this work by laymen has been shown to raise money to start the campaign of education; be it

Resolved, That the New York Academy of Medicine gives its approval of the movement.

AMERICAN THERAPEUTIC SOCIETY

Annual Meeting held at Washington, D. C., May 5-6, 1913

The President, **Dr. Noble P. Barnes**, Washington, D. C., in the Chair

The following officers were elected for the ensuing year: president, Dr. Howard Van Rensselaer, Albany; vice-presidents, Dr. Robert T. Morris, New York, Dr. Francis M. Pottenger, Los Angeles, and Dr. J. Madison Taylor, New York; secretary, Dr. Lewis A. Taylor, Washington, D. C.

A Limited Materia Medica

Dr. Noble P. Barnes, Washington, D. C.: We need a properly limited materia medica with a rational scientific classification for the use of lecturers, examiners and students. Many sudents are so confused in the study of pharmacology, so discouraged in memorizing the mass of details that they fail to collect and retain the wheat and in time become drug nihilists. If we would treat the practice only with the absolutely proved drugs, materia medica and therapeutics would be placed on a sound and rational basis. Such a work should include only indispensable drugs and, so far as practicable, only those that had been assayed chemically or tested physiologically. The accurate knowledge gained from the study and use of these drugs would soon restrict the multitude of recognized and unrecognized remedies, give better control and better quality to these remedies, and enable the student to master everything from solubility to incompatibility, everything from methods of administration to variance in action.

The Absurdities and the Commercialism of the Proposed Ninth Decennial Revision of the U. S. Pharmacopeia

Dr. Oliver T. Osborne, New Haven, Conn.: Among the articles that should have no place in the new pharmacopeia are drugs having no therapeutic value, like lemon-peel and saffron; metals and chemicals of little or no drug value, like aluminum hydrate and uranium nitrate; drugs not needed or drugs whose effects could better be obtained from other drugs already official, like anthemis, cimicifuga, yerba santa, gambir, cottonroot bark, prickly ash, sarsaparilla, leptandra, etc.; preparations inferior to others, like fluidextract of digitalis (tincture better), fluidextract of gentian, fluidextract of cinchona; mixtures and compounds, like Basham's mixture and elixir adjuvans, and drugs that cannot be standardized, like lemon-peel. It is also unnecessary to include the parent substance just because it is desired to include a derivative; for example, the spices because it is desired to include their volatile oils.

DISCUSSION

Dr. Harvey W. Wiley, Washington, D. C.: There is a great difference of opinion on this point among medical men. If 15,000 prescriptions were collected and it was found that one particular ingredient appeared in a considerable number of them, it seems reasonable to conclude that the ingredient has some therapeutic value.

Dr. O. T. Osborne, New Haven, Conn.: Fifteen thousand prescriptions are not a good test. The frequency with which a drug is used is no test as to its value. It might be foisted on the profession through advertisements.

Treatment of Diabetes and Pregnancy

Dr. Reynold Webb Wilcox, New York: If hydramnios exists, or the amount of glucose is excessive and uninfluenced by treatment, or the loss of flesh and strength is marked and, absolutely, if the fetus is dead, the uterus should be emptied at once. The viability of the child is usually problematic. A diabetic woman should not marry or, if married, should not be allowed to become pregnant. If a pregnant woman becomes diabetic, the dangers of labor are increased, not only from impaired vitality and lessened resistance to infection, but also because in severe diabetes a dead and even macerated child might result, or if the disease is mild, one of inordinate size. By successive pregnancies a curable case of diabetes might be converted into one that is incurable. Each patient should be studied carefully, and the procedure adopted that is justified by the condition of the patient and the persistence of the glycosuria.

DISCUSSION

Dr. Alexander D. Blackader, Montreal: I have seen two cases of diabetes of pregnancy: in one there has been no return of the glycosuria after term; the other has gone on to confirmed diabetes.

Dr. Robert T. Morris, New York: Many cases of glycosuria are due to pancreatitis and consequent squeezing of the islands of Langerhans caused by the effects of bacteria escaping from the duodenum. As soon as the pancreatitis is relieved, the glycosuria disappears. The indication is to do away with the infection, if possible.

Dr. J. J. Kinyoun, Washington, D. C.: In 200 necropsies at the tuberculosis hospital I have noted changes in the pancreas with squeezing of the islands of Langerhans in a considerable proportion of cases. Only in rare instances, however, have the patients given a history of diabetes.

Dr. O. T. Osborne, New Haven, Conn.: According to good authority, uranium nitrate is a poison, particularly to the kidneys, and it has no therapeutic value commensurate with the dangers attending its use.

Dr. R. W. Wilcox, New York: Any danger there may be could be obviated by frequent examinations of the urine.

The Treatment of Arteriosclerosis

Dr. Louis F. Bishop, New York: Arteriosclerosis is the reaction of the individual to the proteins that cause the disease. It sets in when something occurs in the individual to make him more susceptible to the disease. Accordingly, I have adopted the "few protein diet." All eggs, fish, meats and soup are excluded. Cheese is allowed as furnishing protein in a safe form, and later chicken is added tentatively. An ounce of castor oil is ordered every forty-eight hours for three doses, then another dose at the end of the week, and later a dose not less than once a month. Nitroglycerin is the great symptomatic remedy for all emergencies. Exercise and outdoor life are essential. For the cure of the arteriosclerosis, the underlying causes should be removed, and among these mental stress is important.

DISCUSSION

Dr. J. Madison Taylor, Philadelphia: Early recognition of the disease is important. It is fortunate in some cases if the individual has some other form of breakdown, as then the arteriosclerosis may be recognized and treated in its incipient stages.

Dr. Edward D. Fisher, New York: Alcohol, overeating, gout, etc., are only predisposing causes. Laboring men are especially susceptible to arteriosclerosis; as a rule they are neither excessive eaters nor drinkers, but they are hard workers, and hard work and heredity are important factors in the etiology. Each one is given vessels good for a certain time under proper conditions; if he uses them conservatively, he may live out his allotted time; if he does not, his life is shortened accordingly. A proper diet, open-air exercise, a quiet life and freedom from worry and care are important factors in the treatment. Diet should be regulated to meet the needs of each individual patient. It should not be too strict when the patient is weak, or when his occupation demands great exertion. General principles of treatment should be broken as conditions necessitate.

Dr. R. T. Morris, New York: The response of the blood-pressure to certain proteins might be utilized as a test for arteriosclerosis in its early stages.

Dr. A. D. Blackader, Montreal: While I cannot help agreeing to a certain extent with Dr. Fisher as to heredity, it is a depressing view. I prefer to think that some persons are more susceptible to certain poisons than others. Some children, for example, are poisoned by eggs. Such substances should be excluded from the diet of those susceptible to hardening of the arteries. Until the factors causing the disease are removed, treatment will prove unavailing. Treatment should be directed to the undue susceptibility of the tissues.

Dr. O. T. Osborne, New Haven, Conn.: I wish to emphasize the danger of changing the diet too suddenly or radically. I have obtained good results from the use of potassium iodid.

Dr. Spencer L. Dawes, Albany, N. Y.: The salines or calomel are preferable to castor oil. The after-constipating effect of the oil is a decided objection to its use.

Dr. George Herbert Evans, San Francisco: I have been impressed with the frequency with which syphilis occurs in arteriosclerotic patients. Cases ascribed to overwork, overeating, etc., are not infrequently the result of syphilis. The real causative factor should be ascertained before treatment is instituted.

Dr. F. M. Pottenger, Los Angeles: Typhoid fever is sometimes followed by hardening of the arteries. Some hardening is usually present in tuberculous patients after two years.

Dr. J. J. Kinyoun, Washington, D. C.: In the post-mortem examination of tuberculous subjects I have found marked arterial changes in a considerable proportion of cases. These changes antedated the tuberculosis, however, and must be due to other causes.

Dr. L. F. Bishop, New York: In my experience no cause can be assigned in about nine-tenths of the cases. In the remaining tenth the cause is usually alcohol, syphilis or one of the other causes ordinarily cited. Too much attention is paid to the advanced cases and not enough to the insidious cases, although the latter are the most important. I do not believe in excluding all protein from the diet. Effort should be made to ascertain the particular protein causing the trouble and eliminate it. It is revealed by the special craving of the patient for it when it is withdrawn. Table salt and all other salines are unfriendly to arteriosclerosis.

Current Developments and Problems in Vaccine Therapy

Dr. A. Parker Hitchens, Philadelphia: The limitations which at present characterize the treatment of infections by vaccines are not permanent and further investigation will result in a wide extension of their field. Mixed vaccines are often of service in the common acute, subacute and chronic catarrhal inflammations of the respiratory mucous membranes. The most promising field of study for the laboratory man to-day is the relation of the infecting bacteria to the blood- and lymph-supply—the possibility of bringing the antibodies formed as a result of the injection into contact with the infecting bacteria.

DISCUSSION

Dr. J. J. Kinyoun, Washington, D. C.: My experience with mixed vaccines has been unsatisfactory. The secret of success lies in determining the cause of infection in each instance as nearly as possible, and acting accordingly.

Dr. A. P. Hitchens, Philadelphia: A hodgepodge or shotgun vaccine cannot be condemned too severely; but in some cases of mixed infection the indications are clear, and mixed vaccines can be used to advantage.

Recent Improvements in the Quinin Treatment of Lobar and Lobular Pneumonia

Dr. S. Solis-Cohen, Philadelphia: Apart from fresh air, dependence has been placed on the following measures: first, the effective use of the very soluble hydrochlorid of quinin and urea in 50 per cent. solution by intramuscular injection; second, the hypodermic injection of cocain hydrochlorid solution or an extract of the posterior lobe of the pituitary body for the maintenance of blood-pressure; third, in cases of prolonged fever, delayed resolution or tardy convalescence, the injection of bacterins (pneumococcus or mixed vaccines, autogenous or stock). No invariable maximum limit has been fixed for the number of injections of quinin or of pituitary liquid, but it is not wise to continue the three-hourly injections beyond the first twenty-four hours, and in only a few cases has it been necessary to use them as long as this. Other measures should be employed according to indication. The treatment has reduced the mortality in the severe cases one-half, and the relief afforded in all cases is remarkable.

DISCUSSION

Dr. T. F. Riley, New York: Statistics as to the prevalence of pneumonia are somewhat unreliable and I am inclined to doubt whether there has been any notable increase in the proportionate number of cases as suggested by Dr. Cohen. Quinin has been found to be a dangerous drug for hypodermic use. It has given rise to tetanus in a number of cases, even when given carefully and under antiseptic precautions. In explanation it has been suggested that the tetanus spores existing in the patient, otherwise innocuous, are aroused to activity by the injection. At any rate, the procedure has not been found free from danger, and it is well to bear this in mind in deciding on the injection treatment. I have obtained good results from the use of large doses of digitalis. Of late I have employed acetylsalicylic acid in combination with it.

Dr. O. T. Osborne, New Haven, Conn.: I do not know of any one "best treatment" for pneumonia. The treatment should always be adapted to meet the needs of the individual patient. Whether or not digitalis should be employed depends on the circumstances. I am opposed to employing it in every case as a routine practice. Its injudicious use has done serious harm in more than one case of pneumonia. When properly given it acts perfectly. Quinin raises the blood-pressure, but its use is followed by a secondary reaction, and I am averse to giving a drug of this kind. The use of the blood-pressure apparatus in private practice has its drawbacks. Among other things it disturbs the patient and makes him nervous, and it is doubtful whether the information obtained by its use makes up for the disadvantages. About all that is necessary to know can be learned with the finger.

Dr. Albert E. Roussel, Philadelphia: It is important to watch the blood-pressure rather than the temperature in pneumonia. A pulse of from 130 to 140 means a failing heart and low blood-pressure, and the chief indication is to raise the pressure. I have considerable faith in digitalis in these cases. If it fails, pituitary extract or some other drugs mentioned can be used. I have recently used the treatment described by Dr. Solis-Cohen in five cases of pneumonia with good results. The measures to be employed depend on the conditions present in each individual case.

Dr. G. H. Evans, San Francisco: The results obtained in the first case that I treated by Dr. Solis-Cohen's method were so satisfactory that I have subsequently employed it in others. The pituitary liquid gave a prompt increase in blood-pressure. There is, however, no one successful treatment for pneumonia. The majority of cases went steadily on to termination in spite of any treatment that might be employed.

Dr. F. M. Pottenger, Los Angeles: The examination of tuberculous subjects has led me to believe that the time required for resolution is much longer than is ordinarily supposed. If the disease is due to bacterial invasion and the proper vaccine can be used, there should be a shortening in the length of the attack and in the time required for resolution. Success in treatment is chiefly due to individualization and the observance of minutiae.

Dr. R. T. Morris, New York: The invasion of the influenza bacillus may account in part for the increase in the number of cases of pneumonia observed in recent years. Whatever method of treatment is employed, it should be given with confidence.

Dr. S. Solis-Cohen, Philadelphia: I have not had a case of tetanus in over 5,000, possibly 10,000 injections. The element of confidence is undoubtedly of the highest importance. The increased mortality of the disease in later years is partly due to the wave of therapeutic nihilism that has spread over the world. Many of the patients might have recovered if they had been under the care of some one who had confidence in his own treatment. Under the treatment I have described, defervescence usually occurs by lysis rather than by crisis. This, and the great relief afforded by the quinin, without corresponding change in the pulmonary condition, indicates that the treatment is antitoxic in character. It would seem as though pneumonia poison and the quinin counteract or neutralize each other; but there is no one treatment for all cases; in individualization lies the key to success.

Pulmonary Syphilis

Dr. Albert E. Roussel, Philadelphia: My patient was a colored woman, single, aged 24, with family history negative as to tuberculosis. Six weeks before admission there had appeared chills, fever, drenching sweats, cough with offensive mucopurulent expectoration and rapid loss of weight. Temperature for weeks reached 106 F., and occasionally it would fall as low as 96.2 F. Sputum negative. Percussion showed scattered but distinct areas of dulness over both lungs, particularly at right base; both apices were hyperresonant, free from râles and the seat of supplementary or puerile breathing; breathing was bronchovesicular and bronchial over the dull areas; vocal resonance was increased; there were subcrepitant râles. Wassermann test was positive. Two months later a gumma developed, and a history of syphilis was obtained. Under vigorous treatment with mercurials and potassium iodid there was almost immediate improvement and rapid recovery.

DISCUSSION

Dr. Thomas E. Satterthwaite, New York: At various times I have tried to bring up a discussion on this subject. At first I could hardly get any one to believe that there was such a disease as syphilis of the lungs. The cases were thought to be instances of pulmonary tuberculosis. The chief difficulty is in the differential diagnosis. The rapid improvement under antisyphilitic treatment and a positive blood-reaction are significant aids.

Dr. F. M. Pottenger, Los Angeles: The absence of tubercle bacilli is not conclusive evidence. Some tuberculous patients rarely present bacilli in the sputum. Whenever I suspect syphilis, I employ antisyphilitic treatment in addition to antituberculosis treatment. I have used potassium iodid in many cases of pulmonary tuberculosis with bneficial effect.

Dr. O. T. Osborne, New Haven, Conn.: Potassium iodid is of value from a diagnostic point of view. It is contraindicated in many cases of pulmonary tuberculosis. If, however, there are no tubercle bacilli in the sputum it can be given, and if, afterward, bacilli are found, the diagnosis is clear. The iodid seems to increase the number of bacilli thrown out in the sputum. It is liable to stir up the pulmonary condition in incipient cases and make matters worse. In chronic cases the effect is somewhat similar, but it enables the patient to expel the bacilli.

A Case of Influenzal Meningitis in the Adult Complicated by Pneumonia; Recovery

Dr. Thomas E. Satterthwaite, New York: The case was somewhat unusual in that it presented three types of grippal infection, the respiratory, the gastro-intestinal and the nervous. It is, so far as I know, the only recorded instance of full recovery in influenzal meningitis. The patient was a man aged 25, of normal physique. There had been the usual symptoms of a mild influenza. When first seen he was unconscious, with pupils irregularly dilated and irresponsive, and the breathing rapid and labored. Temperature 103.5 F., pulse 138, respirations 26. Under bromids consciousness returned, but there was restlessness and twitching of right leg and facial muscles. On the second day the signs of pneumonia were easily recognizable; temperature 106 F., pulse 120, respiration 40. Three hundred grains of bromids were given during the day. On the third day there were nausea and vomiting, and on the fourth, vomiting of dark fluid and blood. Calomel, 1 grain in divided doses; hexamethylenamin, 10 grains in a pint of water, 30 grains in all during the day, and strychnin sulphate, 1/60 grain every four hours, were administered. On the sixth day there was low muttering delirium; bromids were given freely and hexamethylenamin suspended. On the seventh day, camphor, 3 grains in aseptic oil, was administered hypodermically every six hours. Strychnin was continued. Temperature had fallen to 99 F., pulse to 84 and respirations to 24. On the tenth day camphor was suspended. From this time on recovery was rapid and uneventful.

DISCUSSION

Dr. F. E. Stewart, Philadelphia: Some authorities recommend the use of camphorated water instead of the oil: I should like to see more study along this line.

Dr. H. B. Anderson, Toronto: I have seen two cases of meningitis due to infection. A student had suffered for some years with ear trouble, but of late it had been quiescent. He became ill with grip and soon developed violent headache, restlessness and delirium, and died after a few days. A woman, aged 45, became ill with influenza of the ordinary type; while she was improving there suddenly developed marked symptoms indicative of meningitis, and she died after a few days. Lumbar puncture failed to disclose the organism.

The Medical Treatment of Cholelithiasis

Dr. H. B. Anderson, Toronto: While surgical procedure is frequently the best, and often the only, means of offering a chance of relief, its advocacy based on certainty of cure and assurance of non-recurrence is unwarranted. The object in view can often be obtained by non-operative treatment, especially in early and mild cases, and particularly after the first attacks, before serious local damage has been done by the infection. Medical treatment should be given when the patient's physical condition does not warrant operation, when operation is refused, as a preliminary to operation, and in all cases after operation to prevent reinfection and recurrence, if possible.

Scarlet Red in Ulcer of Stomach and Duodenum

Dr. Julius Friedenwald, Baltimore: Scarlet red is a useful adjuvant in the treatment of gastric ulcer. While it cannot replace the usual forms of treatment, when administered with them it increases the beneficial effect. It is particularly serviceable in the treatment of ambulatory cases. It does not interfere with the administration of other remedies, and, indeed, the effect of its combination with the alkalies or belladonna is at times most beneficial. Thirty-seven cases treated with scarlet red were subacute. It is not a specific but it was a useful adjuvant.

The Dangers and Disadvantages of Spinal Anesthesia

Dr. W. Wayne Babcock, Philadelphia: Ether for general use remains the standard anesthetic in spite of its many disadvantages; the newer methods of anesthesia have a use restricted to those who have particularly qualified themselves; spinal anesthesia is dangerous in myocardial degeneration, particularly with obesity, and it should be used with care and avoided in grave shock and hypotonicity of the vasomotor system; severe headache and abducens palsy might follow the use of improperly prepared solutions or a faulty method; excessive dosage, high point of injection, improper position or handling of the patient, might be followed by respiratory or circulatory arrest. If the patient cannot be watched constantly for an hour after the injection, or if the operator is not familiar with the technic or is unprepared to meet the emergencies, spinal anesthesia should not be used.

AMERICAN ORTHOPEDIC ASSOCIATION

Twenty-Seventh Annual Meeting held in Washington, D. C., May 6-8, 1913

(Concluded from page 1818)

Importance of Positive Support in the Curative Treatment of Weak Feet

DR. ROYAL WHITMAN, New York: In 1890 97 cases of flat-foot were mentioned in the report of the Hospital for Ruptured and Crippled; in 1906 there were 1,219, and in the last report there were 2,109. Flat-foot is an acquired weakness and is understood to be preventable and curable. The lowered arch is the secondary and not the primary deformity. Palliation is often mistaken for cure. I have a brace which I have used for several years with success. A brace that will not only prevent deformity, but the predisposition to it, and will enforce a proper attitude in walking, may be regarded as a most important measure in curative treatment. The most satisfactory material for this brace is thin polished steel, galvanized. The essential accompaniment of positive support is a proper shoe, inclined somewhat outward by thickening the inner part of the heel and sole. The aim of treatment should be to cure, rather than to relieve flat-foot.

A Rapid and Accurate Method of Taking Casts of the Feet

DR. MICHAEL HOKE, Atlanta, Ga.: This procedure has done away with the disadvantages of the older methods. I take plaster bandages and soak them in water, flattening them out on the table, thus making a square plaster splint 4 inches wider than the foot, and 2 inches longer. Then with a pair of scissors I cut the edges, lay the splint on the foot, and hold the foot with my hand in the position in which I wish it to be. I then wind an ordinary gauze bandage round the plaster and the foot, to hold the plaster while it is hardening. After it is hardened the foot is taken out of the cast.

DISCUSSION

DR. ROBERT B. OSGOOD, Boston: We can all agree with the principles enunciated by Dr. Whitman, but the question of the practicability of the method must be faced by us all. If we cannot make a permanent brace, we must use Dr. Whitman's appliance; but I feel that whenever possible we should relieve our patients from the burden of steel.

DR. W. E. BLODGETT, Detroit: My experience has been that the best pain-relieving plate is one that is arbitrary. The plate I make is in no sense a curative plate, but one to relieve pain. The point as to whether or not the Whitman plate is a curative one must be decided either practically or theoretically. From the practical point of view I cannot speak. Theoretically, however, arguments can be urged against the assumption that it is curative. I cannot see that this plate can be expected to strengthen the muscles. If it is not curative, why should we permit its use?

DR. H. AUGUSTUS WILSON, Philadelphia: I have endeavored to establish a standard of what is natural in an unclothed foot. On examining the feet of a number of savages, I found that they all stood flat-footed, with the feet pronated in the position which I had believed necessitated mechanical support; yet they had superb musculature, and capabilities beyond conception. It seems that we are considering a theoretical foot when we apply therapeutic measures. If we can get in our minds a standard natural foot, we shall have something to build a superstructure on. The Japanese have fine feet. They walk without heels, and the result is that the flexors are strong and powerful. They walk with their toes in and have wonderful foot capabilities; and yet, when standing, they are apparently flat-footed. What we are after is not the physical resemblance of a foot, but a physiologic action.

DR. PHILIP HOFFMAN, St. Louis: The question is whether or not the relationship between the shape or form, and the function of the foot is a definite one. I have made observations on 400 primitive subjects, bare-footed and wearing sandals, and I have found the same lack of relationship between the form and the function of their feet, in which the arches were very low. We are taught that this low arch should predispose to weakness; yet, in not one of these natives had any symptoms of weakness ever been present. Then I tried about 200 white men, shoe-wearers, who had never had foot symptoms, and I found about the same percentage of low arches in these symptomless feet. Then I examined a number of symptomless negro feet with the same result. I was therefore convinced that there is no definite relationship between the shape of the foot and the function of that foot.

DR. CHARLETON WALLACE, New York: I classify the types of feet that happen to come into my office. The first class—mild cases that show no symptoms of pain—can easily wear the Whitman brace with more or less pain. The brace, the shoe and the exercise give perfectly satisfactory results. The second class—cases in which the peroneal spasm is rather strong—must be treated to overcome the spasm before the Whitman brace can be used. The third class—the rigid, stiff feet—must be made flaccid before the brace can be worn. We do not expect the Whitman brace to cure the foot; but it aids toward that end. Our whole aim is to cure the foot by stretching the muscles, giving the foot a crutch, as it were, to walk on while being corrected.

DR. E. H. ARNOLD, New Haven, Conn.: Within the experience of all of us, the American sidewalk has changed from a soft to a hard one. In a soft walk the foot shapes the ground; but with an unyielding one, the sidewalk shapes the foot. You will find that the Indian, the colored man or the Japanese will go to pieces on our sidewalks and contract flat-foot. Walking on hard ground is one of the etiologic factors in flat-foot, and goes far to explain the great increase in this condition. The question is how far any plate will cure flat-foot in these conditions.

DR. ARTHUR H. CILLEY, New York: The results obtained from treating flat-foot do not depend on the form of treatment, but on the ability of the man to do the work. If the patients will use the muscles, they will recover. If the Whitman plate is properly applied they cannot help using these muscles.

Heliotherapy (of Rollier) as an Adjunct in the Treatment of Bone Disease

DR. ROLAND B. HAMMOND, Providence, R. I.: Heliotherapy of sinuses has been practiced for many years. Rollier's method of exposing the entire body is comparatively new. Experiences differ in a high and dry climate, and in a low, foggy land. I believe that heliotherapy is of marked value in the treatment of bone disease by stimulating the recuperative powers of these parts and shortening the course of the disease. It can be used at the seashore as well as in a high altitude. Sinuses tend to close more quickly with its use than without treatment. Combined with sea bathing and outdoor life, it is a most valuable addition to our treatment.

DISCUSSION

DR. B. E. MCKENZIE, Toronto: I have had a large experience along this line of outdoor treatment. We do not expose our patients to the sun for so long a time, nor do we expose the entire body. It would probably be better if we did. I believe that the time of treatment essential for the cure of tuberculous joint disease is reduced 50 per cent. by the method we follow. The number of abscesses is reduced also.

Dr. Roland B. Hammond, Providence, R. I.: For many years we have been treating the sinuses by exposing parts of the body; but according to Rollier's theory we must expose the whole body. We have done this and consider it a distinct advantage.

The Use of Oil Injections into the Knee-Joint by the Method of Open Incision

Dr. E. G. Brackett, Boston: The injection should be made by open incision, and not by puncture. The fluid is always left in the joint under tension. Any adhesions existing should be broken up before the joint is filled with oil and the capsule closed. No handling should be permitted, particularly of tuberculous joints. Fixation in plaster or by splint immediately afterward should never be employed. It is doubtful if the final results in a disease so insidious can be given until a very long time has elapsed. An apparent cure, however, has resulted in three cases which have stood the test from a year and a half to two and a half years. The procedure is of use only in cases in which the abnormal condition is confined to the synovial membrane.

DISCUSSION

Dr. E. W. Ryerson, Chicago: I use white petrolatum only in dealing with dry joints, as some patients have a painful idiosyncrasy toward yellow petrolatum. I have used it in cases of gonorrheal inflammation of the knee-joints in which the capsule was beginning to contract.

Dr. L. W. Ely, Denver: The absence of fluid in ankylosed joints is not the cause of the disease, and I think that it is receiving more attention than it should. There is no way by which to tell a tuberculous joint, except by demonstrating the tubercle bacillus, and even then mistakes are sometimes made. You cannot cure these stiff joints by injecting an oily substance into them.

Dr. E. W. Ryerson, Chicago: Nothing has been said about curing these joints with petrolatum; but the injection relieves them so much that, by increased motion, the natural synovial secretion returns.

Dr. J. T. Rugh, Philadelphia: For cases of distinct infection, in which the germ can be recovered from the joint cavity, I want to mention the glycerin-formaldehyd solution, which has distinct value in these cases.

Dr. E. G. Brackett, Boston: One of the most difficult things is to distinguish between mild tuberculous infections and other forms of arthritis. Many times I have found my diagnosis reversed after operation. We should imitate Nature, so far as possible, in treating this disease. In making these injections we imitate her.

A Method of Osteotomy of the Lower End of the Femur in Cases of Permanent Flexion of the Knee-Joint

Dr. Robert B. Osgood, Boston: In fracture of the knee-joint a cuneiform osteotomy of the lower end of the femur, as near the joint surface as possible, would seem to be the operation of choice. Unless a wedge of bone is removed the tension on the vessels and nerves is often too great to allow complete straightening, even if the hamstrings are divided. I have devised an apparatus to overcome the difficult features. I use an ordinary jig-saw. Paper patterns are made in order to determine the proper dimensions of the wedge of bone to be extracted. When the posterior cortex has been partially sawed through the arms of the saw are removed, leaving the saw-blade in as a mark for orientation. Then a second saw with blade, teeth downward, is used to make a cut on a straight line down to the position of the first saw and both blades are removed. Thus a quadrilateral portion of bone is freed and pushed out. In our case union has apparently been formed in from four to six weeks.

DISCUSSION

Dr. W. S. Baer, Baltimore: I have used Dr. Osgood's method in one case, and have had extremely satisfactory results. There are certain things in regard to the technic of an anthroplastic operation which should be followed. The membrane wants to be sewed in very carefully around the joint. The passive motion after-treatment should not be started too early. Three or four weeks of absolute rest with fixation in plaster should be given.

Dr. J. P. Lord, Omaha: Dr. Osgood has greatly refined an operation which I have been doing for four or five years. My operations were done to prevent the patients from having bent knees from contracture deformity, the result of infantile paralysis.

Dr. A. H. Freiberg, Cincinnati: There are two distinct propositions to consider in these cases. The first is the amount of bone that has to be removed, and the second, the character of the joint. In the knee, we have a joint whose mechanical control is ligamentous. If we get a pseudoarthrosis, it is uncontrollable if there is considerable motion.

Foerster Operation

Dr. S. J. Hunkin, San Francisco: In all I have had eighteen operations on fifteen patients. In the entire series there were but two deaths. Therefore I may say that the results of the treatment of spastic paralyses by Foerster's operation have been fairly good. While they have not been so entirely satisfactory in all respects as I had been led to expect, yet all my patients showed greater improvement than I formerly attained with other procedures.

DISCUSSION

Dr. J. K. Young, Philadelphia: Two of these cases came under my observation; one was a cervical, the other a lumbar case. Neither was operated on by me. The operation on the first was unsuccessful, and the second patient was made worse by it.

Dr. G. G. Davis, Philadelphia: I might mention a third operation done by the same surgeon who operated on the two patients referred to by Dr. Young. The patient was a boy of 14, and his condition was markedly improved. He is still alive.

Dr. S. J. Hunkin, San Francisco: The shock in this operation is in proportion to the time taken to perform it. After my first attempt, I have never taken over forty minutes, and I believe that it can be done in thirty.

Relation of Trauma to Bone Tuberculosis?

Dr. H. Augustus Wilson, Philadelphia: The greatest confusion exists as to trauma causing bone tuberculosis. It is important that the conflicting statements should be analyzed. If severe injuries do not cause bone tuberculosis, why do trivial ones? What is trivial trauma? Formerly, sprains were considered trivial; now the roentgenograph has proved that in many instances sprains are, in reality, fractures. Trauma is not considered a cause of tuberculosis in other structures than bone.

DISCUSSION

Dr. James K. Young, Philadelphia: Coming from such eminent authority, the statement that trauma has nothing to do with bone tuberculosis may be misleading. Most authorities believe that trauma has something to do with the production of tuberculosis in the joint.

Neglected Infantile Paralysis

Dr. Wallace Blanchard, Chicago: Paralytic club-foot is the most frequent deformity. Its prevention gives far better ultimate results than can possibly be obtained by any of the operative and mechanical treatments. The large number of paralytic club-feet seen in every large clinic emphasizes the vast amount of neglect in these cases.

DISCUSSION

Dr. C. L. Starr, Toronto: My colleague, Dr. Gallie, is largely responsible for the splendid work we are doing along this line. Take a case of talipes, for instance, instead of putting the silk in and attaching the Achilles tendon to the heel, we flex the foot to a right angle and split the periosteum at the tibia sufficiently to place the Achilles tendon in it. Fastening it in there pulls the foot absolutely into the position of straight-foot and achieves the result. This method is adapted to almost any type of paralytic condition.

DR. WALTER TRUSLOW, Brooklyn: The use of a long plaster-of-Paris dressing from the upper third of the spine to the toes acts automatically in overcoming these contractions to the hip flexors and abductors.

DR. E. G. ABBOTT, Portland, Maine: I have made muscle transplantation in many hundreds of cases, and in the majority I have had success, particularly in connection with the foot. I have never had any trouble in getting proper alignment of the bone.

DR. R. E. SOULE, New York: I have lately developed what I believe to be a very advantageous procedure for the treatment of the joint in acquired valgus of the foot. We can restore the foot almost absolutely by anchoring it to the astragalus. I have been able by this method to remove all supports or correcting apparatus, and the patients have had only a slightly perceptible limp.

DR. B. E. MCKENZIE, Toronto: I tried the method spoken of by Dr. Truslow, without success, in a case a few months ago; later I made an extensive section of the muscles in the front by an open incision, keeping the child recumbent with the lordosis fully corrected in plaster until the healing had occurred. Since then I have followed this practice exclusively, and have had good results.

DR. A. H. FREIBERG, Cincinnati: I believe that we are much too precipitate in our determination to operate in neglected cases of this disease. I do not decide on a tendon transplantation, particularly in the lower extremity, until from four to six months of mechanical and massage treatment have been gone through with.

DR. WALLACE BLANCHARD, Chicago: The orthopedic surgeon should be called in early in cases of infantile paralysis, and the prevention of these deformities will be a matter that will be accomplished.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Albany (N. Y.) Medical Annals

May, XXXIV, No. 5, pp. 253-316

1 Obituary Sketch of William Hailes. A. Vander Veer, Albany, New York.
2 Bender Hygienic Laboratory. H. S. Bernstein, Boston.
3 Hospitals and Sanatoria for Tuberculosis. W. S. Mills, New York.
4 Defective Delinquent. F. L. Christian, Elmira, N. Y.
5 Three Cases of Diphtheria from Carrier. H. P. Sawyer, Troy, N. Y.

American Journal of Anatomy, Philadelphia

May, XIV, No. 4, pp. 411-499

6 Fasciculus Cerebrospinalis in Albino Rat. S. W. Ransen, Chicago.
7 *Development of Membrana Tectoria with Reference to Its Structure and Attachments. C. W. Prentiss, Chicago.
8 *Chromosomes in Man. H. L. Wieman, Cincinnati.
9 Spermiogenesis of Pribilof Fur Seal (Callorhinus Alascanus J. and C.). J. R. Oliver, San Francisco.

7. **Development of Membrana Tectoria.**—The researches made by Prentiss have convinced him that the membrana arises as a thin cuticular plate which is first developed over the free ends of the columnar cells which form the greater (inner) epithelial thickening of the basal cochlear wall. As it is present in fetuses of 5 cm., before the development of the hair cells in the spiral organ, it cannot be regarded as developed from these hairs. The greater epithelial thickening gives rise to the epithelium of the labium vestibulare, to the lining of the spiral sulcus and to the inner half of the spiral organ (inner supporting cells, and probably to the inner hair cells and inner pillars). The lesser epithelial thickening forms the external portion of the spiral organ. The membrana grows in thickness by the secretion of a cuticulum formed between the ends of the epithelial cells, rapidly at first over the cells of the greater epithelial thickening (5 to 13 cm. stages), later over the cells of the lesser epithelial thickening.

In sections through the axis of the cochlea the membrana has a striated or lamellated appearance. The striae curve outward and downward from the labium vestibulare where the membrane remains thin. In sections perpendicular to the lamellae the structure of the membrana is that of a reticulum with thickenings at the angles of the meshes. It is therefore neither lamellar nor reticular but a chambered structure or "honeycomb" of hollow tapering cuticular tubes or chambers normally filled with a fluid resembling the endolymph. The bases of the chambers during development rest between the ends of the epithelial cells. The thickenings at the angles of the meshes of the reticulum extend lengthwise along the whole extent of the tubes or chambers and in sections through the axis give the membrane its striated appearance, the striae having been variously interpreted as hairs, cilia, fibers and lamellae. As the nasal epithelium increases in width its cells are carried outward, away from the modiolus. This carries the bases of the growing cuticular chambers outward also, though their tips remain stationary. The result is the inward inclination of the chambers as they are followed from base to tip.

The chambered structure of the membrana explains the "border-plexus" of Lowenberg, the accessory tectorial membrane observed by Hardesty, and the "reticular structure" of the membrana described by various investigators. In fetuses of 18.5 cm., the membrana in the upper turns of the cochlea projects outward beyond the spiral organ and is firmly attached to the cells of both the spiral organ and of the greater epithelial thickening. In this turn the spiral sulcus has not yet fully formed and the distance from the inner angle of the cochlea to the pillars is fully as great as in the preceding stage. Thus the position of the membrana cannot be ascribed to an inward shifting of the spiral organ, but is due to its rapid development from the cells of the spiral organ. The attachment of the membrana to the spiral organ was proved not only by sections but by dissections of both fresh and fixed cochleae. Between stages of 15 and 25 cm., the inner cells of the greater epithelial thickening change from a high pseudostratified columnar type to that of a simple cubical epithelium. These cells lose their attachments to the membrana and the space which as high columnar cells they occupied, becomes the spiral sulcus. The change is brought about by the degeneration of many of the cells and the transformation of those remaining.

In sections of the cochlea at full term the membrana was found attached to the inner supporting cells of the spiral organ and to the outer hair cells as well as to the labium vestibulare. This attachment is regarded as normal because it was indicated by dissection of fresh cochleae; because in development it is so attached; because the attached membrane when shrinking under the action of reagents exerts such a pull on the spiral organ as to distort it. Lastly, because physiologically and anatomically it is the condition which we should expect to find if the membrana is functional in transmitting sound waves to the auditory hairs. Although usually described as lying above, the normal position of the membrana may be directly beneath the spiral organ. As it is slightly heavier than the endolymph, if unattached it would float free especially when actively moved or jarred. This would interfere seriously with the function of the organ.

Reasons why the membrana detaches itself from the spiral organ more readily than from the labium vestibulare are as follows: (a) The outer portion of the membrana being chambered shrinks much more than the inner zone which is a solid cuticular plate; (b) shrinkage of the outer zone affects not only the width but the length of the membrana; (c) being a spiral structure, the decrease in length decreases the diameter of the turns, thus drawing the membrana inward. This would tend to separate it from its outer attachment to the cells of the spiral organ. The arguments against regarding the basilar membrane as a medium for transmitting sound waves to the hair cells, do not hold for the membrana tectoria. The membrana tectoria is a delicate chambered cuticular structure, co-extensive with the spiral organ. It is attached by its inner zone to the labium vestibulare by its outer zone between the cells of the spiral organ, thus bridging over the spiral sulcus. Its sectional area at base and at apex is as 1:40 approximately. As the hairs of the auditory cells project directly into the chambers of the membrana, vibrations of the membrana would be directly transmitted to them. As the membrana is much thinner and narrower in the basal turns than in the apical region it is probable that different portions of it respond to sounds of different pitch. In this sense it may act as a resonator.

8. **Chromosomes in Man.** — Wieman describes somatic mitoses in which thirty-three, thirty-four and thirty-eight chromosomes occur. In addition to these he has observed other cases in which the number is thirty-four. In still other instances, he says, it is impossible to state the number with certainty, but careful examination of several scores of mitoses leads him to believe that the number thirty-four approximates the one that occurs most frequently in the cells of the embryo under consideration. The work of Duesberg, Guyer, Branca and Gutherz indicates that the premitotic number is about twenty-four, and that the first spermatocyte metaphases contain one-half this number. Wieman's studies show clearly that in a human embryo the somatic mitoses display chromosomes in a number so much larger than this approximate premitotic one, that the two numbers can not be the same. One may not always be able to determine with exactness the number of chromosomes, but when the number observed in a great many cases is ten more than the expected average, the values in the two cases must be different. While it appears that the somatic number in man, though not a constant one, perhaps, is different from the spermatogonial number, Wieman would not overlook the results of Moore and Arnold who observed sixteen bivalent chromosomes on the first spermatocyte spindle. The diploid number, thirty-two, would be one closely approaching the number found by him in the somatic cells.

Boston Medical and Surgical Journal

May 29, CLXVIII, No. 22, pp. 785-824

10 Protection of Milk. E. M. Buckingham, Boston.
11 Control of Careless and Incorrigible Consumptive. M. W. Richardson, Boston.
12 Efficient Boards of Health. R. N. Hoyt, Boston.
13 *Open-Window Schoolrooms. A. G. Rice, Springfield, Mass.
14 Control of Careless and Incorrigible Consumptive. C. T. Callahan, Holyoke, Mass.
15 *Frequency of Transition of Ulcer of Stomach into Cancer. J. Friedenwald, Baltimore.
16 *Tuberculous Osteomyelitis of Digits. R. M. Green, Boston.

13. **Open-Window Schoolrooms.**—The open-air school from Rice's point of view is not the last word. Conceived with but a single object in view, instituted with impulsive enthusiasm and developed not step by step, but at a single bound, he says that its possible consequences along lines other than hygienic were not foreseen. Moreover, even from a hygienic standpoint, experience with the innovation has brought forth something of a shock, for it has not proved to be the panacea for the physical ills of schoolchildren that was confidently hoped for. Certain children have not only failed to derive benefit from it, but have even suffered harm; and its application has had to be restricted. Sober, second thought has disclosed that the failure to regard possible consequences of the innovation along lines other than hygienic has been disastrous for its continuance as a valuable public institution. From an economic standpoint the open-air school is a poor investment; from an educational point of view it is a step backward, and from a moral standpoint it is unwise. It would seem necessary, therefore, to recede a bit from the perilously advanced position that has been taken and the next step backward is the open-window schoolroom. Its hygienic value is an accepted fact: economically it demands a minimum of expense and affords equal advantages for all; educationally it keeps step with progress, and morally it has nothing to condemn it.

15. **Transition of Ulcer of Stomach into Cancer.**—In a study by Friedenwald of 1,000 cases of cancer in which careful records have been kept, there was a history of some previous digestive trouble in 232 cases (23.2 per cent.). Of the 232 cases 109 had slight attacks of indigestion for a period of five years or more preceding the present gastric disease, while twenty-five had slight attacks only during the last five years preceding the present disease. Of the remaining 123 cases, thirty-two had chronic indigestion more or less all of their lives, of which twenty-nine had chronic indigestion mainly during the last five years preceding the present illness. Seventy-three cases gave a definite history of former gastric ulcer. It is therefore evident that in the 1,000 cases, but 23 per cent. present a history of any previous digestive disturbance whatever, even in the slightest degree, and that but 7.3 per cent. give a direct history of ulcer. If, therefore, all of the former digestive disturbances be considered as due to ulcer, the formation of gastric cancer from ulcer could not have taken place in more than 23 per cent.; if all of the cases with slight digestive disturbances be disregarded in this series this percentage is reduced even to 12.3 per cent. Friedenwald therefore maintains, notwithstanding the sweeping statement of Wilson and MacCarty that "109 cases (71 per cent.) which present pathologic evidence, gross and microscopic, that is, large ulcers with scar tissue centers and overhanging borders, deep in the bases of which cancer is present, in almost every instance have unmistakably originated on the lesser curvature of the stomach, the usual site of gastric ulcer. Further, almost every case gives a clinical history of gastric ulcer for a long period of years preceding the relatively short period when the history became that of gastric cancer," that from a study of his own cases from a clinical point of view, as well as from the pathologic studies of Aschoff, these figures are far too high, and that while he believes that gastric ulcers are at times transformed into malignant growths, he does not believe that this change takes place in more than 23 per cent. of cases and probably in not even so large a proportion.

16. **Tuberculous Osteomyelitis of Digits.**—Tuberculous osteomyelitis of the digits Green regards as essentially a disease of infancy and childhood, presenting a definite clinical picture and tending strongly to spontaneous recovery. Pathologically it is characterized by bone destruction and rarefaction and by chronic inflammatory reaction in the surrounding soft tissues. It may heal by resolution and absorption, or by sequestration, suppuration and sinus formation. Its differential diagnosis from pyogenic osteomyelitis, sarcoma and syphilitic dactylitis may be made by clinical signs and Roentgen ray examination. Its prognosis for anatomic and functional recovery is good and is proportionate to the amount of bone destruction and scar-formation. Therapeutically primary emphasis is laid, Green says, on general hygiene and local fixation. Incision should rarely be resorted to, since it complicates the dressing, protracts convalescence and increases subsequent deformity and disability. Amputation, he says, is almost never indicated. Probably treatment with the Roentgen rays, or other forms of irradiation, is a valuable adjunct to the conservative therapeutic measures above described, since it expedites recovery by stimulating natural reparative processes.

California State Journal of Medicine, San Francisco

May, XI, No. 5, pp. 173-210

17 Summer Diarrhea from Standpoint of Clinician. E. C. Fleischner, San Francisco.
18 Relation of Academic Medical School to Medical Community. H. C. Moffitt, San Francisco.
19 *Treatment of Spiral Fractures of Tibia. C. G. Levison, San Francisco.
20 A Physician's Vacation. D. W. Montgomery, San Francisco.
21 Acute Poliomyelitis in California. F. F. Gundrum, Sacramento.
22 "Impressions." H. J. Kreutzmann, San Francisco.
23 *Staphylococcus Spray for Diphtheria-Carriers. J. Fay, Berkeley.
24 Case of Sarcomatosis. J. H. O'Connor and W. T. Cummins, San Francisco.
25 Management of Typhoid. G. R. Carson, San Francisco.

19. **Treatment of Spiral Fractures of Tibia.**—Spiral fractures of the tibia, Levinson says, should be treated conservatively and if satisfactory approximation after tenotomy of the tendo Achilles has not been obtained after attempts have been made and controlled by the Roentgen ray over a period of four days, then surgical intervention should be resorted to; four days should be the limit, for after this time operation becomes more difficult. Operation should be performed with "Esmarch," which permits it to be done by instruments alone, for in this particular condition the gloved hands should not be introduced on account of the sharpened ends of the bone, which may perforate the rubber glove, thereby increasing the danger of infection. In compound spiral fractures of the tibia the lower end of the upper fragment should be chiseled off as soon as the danger of infection has passed and the skin united, thereby converting the compound fracture into a simple fracture and materially shortening the period of convalescence. In the laboring man no attempt should be made to treat this fracture without operation.

23. **Staphylococcus Spray for Diphtheria Carriers.**—An investigation was undertaken by Fay to make a comparison of the values of sprays of *Staphylococcus aureus* culture and of a mild antiseptic solution in the treatment of the noses and throats of diphtheria carriers. The length of time necessary to cause diphtheria bacilli to disappear from the throats of carriers by the use of sprays of *Staphylococcus aureus* or of dilute antiseptics was sufficiently long to suggest that there was no decided antagonism, under the conditions of treatment, between either solution used and the diphtheria bacillus. The difference between the effects of the staphylococcus spray and of the control spray suggested a slight advantage for the staphylococcus spray. Treatment of diphtheria carriers with sprays of staphylococcus culture or of antiseptic fluids, Fay says, should be continued for several weeks after the last positive culture has been obtained. It is highly desirable that further search be made for a method of treatment which will be promptly efficacious in ridding the throats of diphtheria convalescents and carriers of their infection.

Indiana State Medical Association Journal, Fort Wayne

May, VI, No. 5, pp. 201-254

26 Abdominal Calamities. G. G. Eckhart, Marion.
27 Rheumatism and Its Kind; Classification and Diagnosis. L. A. Bolling, Kramer.
28 Prostatectomy in Aged, with Report of Two Successful Cases Ninety Years of Age. H. A. Moore, Indianapolis.
29 Myelocytic Leukemia. B. G. Keeney, Shelbyville.
30 Simple Method for Intravenous Administration of Neosalvarsan. J. R. Thrasher and B. Erdman, Indianapolis.

Journal of Abnormal Psychology, Boston

May, VIII, No. 1, pp. 1-72

31 Relation between Anxiety Neurosis and Anxiety Hysteria. E. Jones, Toronto.
32 Effect of Psychophysical Attitudes on Memory. W. D. Tait.
33 Case of Synesthesia. I. H. Coriat, Boston.
34 Psycho-Analytic Study of Severe Case of Hysteria. L. E. Emerson, Boston.

Journal of Infectious Diseases, Chicago

May, XII, No. 3, pp. 277-509

35 *Etiology of Relapse in Malarial Infections. W. M. James, Ancon, Canal Zone.
36 *Inhibitive Action of Bile on Bacillus Coli. E. O. Jordan, Chicago.
37 Use of Virulent Salt Solution as Virus in Manufacturing Hog Cholera Serum. W. S. Robbins, East Lansing, Mich.
38 *Is Specificity of Anaphylaxis Reaction Dependent on Chemical Constitution of Proteins or on *Their* Biologic Relations? H. G. Wells and T. B. Osborne.
39 Maintenance of Virulence by Bacillus Abortus, Bang. F. M. Surface, Lexington, Ky.
40 *Experimental Streptococcal Arthritis in Rabbits. L. Jackson, Chicago.
41 *Interrelations in Streptococcus Group, with Special Reference to Anaphylactic Reactions. D. J. Davis, Chicago.
42 *Experiments Bearing on Droplet Infection in Diphtheria. O. Teague, New York.
43 Epidemiologic Diagnosis and Management of Typhoid. C. J. Hunt, Harrisburg, Pa.
44 Systematic Study of Coccaceae in Collection of Museum of Natural History. I. J. Kligler, New York.
45 Morphology of Sporothrix Schenckii in Tissues and in Artificial Media. D. J. Davis, Chicago.
46 *Meiostagmin and Epiphanin Reactions in Diagnosis of Carcinoma. W. H. Burmeister, Chicago.
47 Properties and Agglutinations of Non-Pathogenic Vibrios. C. V. Craster, New York.
48 Outbreak of *Septic Sore Throat* in Concord (N. H.), January, 1912. T. A. Mann, Durham, N. C.

35. **Relapse in Malarial Infections.**—James suggests that if the hypothesis be accepted that the asexual cycle alone is the cause of relapse, and under certain conditions takes on a relative immunity against quinin, an explanation is offered of all the factors concerned in the etiology of relapse; no other hypothesis will explain satisfactorily the correlation between these factors and the data which to this time have been collected about relapse. These factors in relation to the asexual cycle are summarized by James as follows: Relapse is one of the most common factors in malarial infection; and certainly the asexual cycle is that phase of the malarial parasites found most frequently associated with the primary infection and relapse, and with one relapse and the succeeding one. Relapse follows frequently the so-called spontaneous cure of malaria, because the asexual cycle in such an instance often persists, in numbers that can be detected by the "thick film" method, or slightly below this limit, in the intervals of apyrexia.

Infections treated insufficiently with small doses of quinin will in all probability relapse, because the parasites of the asexual cycle in the spleen and marrow are very slightly, if at all, affected thereby. Relapse is less likely to occur when the infection is promptly and vigorously treated, because the older the asexual cycle, the more resistant to quinin it becomes, as shown by numerous clinical observations. When a relapse occurs, with manifestations of parasites in the peripheral blood, during the administration of quinin by mouth in sufficient doses, faulty absorption of the drug is sure to exist, and the method of medication should be changed. The asexual generation does not have an unlimited potential of vitality. That is why, if death does not supervene in the course of a malarial infection, the infection itself will in time die out, but often not until it has done irreparable damage. It is easier to eradicate an infection in persons in good health, because in these the natural protective forces of the body aid the action of quinin. The hypothesis also concurs with the two factors in the life-cycle of the parasites, which are intimately connected with the etiology of relapse: because (a) quinin given by the mouth very often does not eradicate the asexual cycle in the marrow and spleen, and the residual parasites become immune; and (b) the longer the asexual cycle persists the easier it acquires immunity against the drug.

The practical importance of the hypothesis lies in the value it has as a guide to treatment of malaria. Small doses of quinin, even in the mildest infections, serve only to render the asexual cycle relatively immune, so that larger doses, which, if they had been given early in the attack might have eradicated the parasites, are later without effect. Clinical experience in Ancon Hospital in the treatment of malaria in American employees has shown that when the liquid preparation of quinin sulphate was given in doses of 20 grains per day by mouth, while acute attacks were often controlled, recurrent cases in large numbers followed at very short intervals later, and in the treatment of these, larger doses were necessary. A routine treatment of 20 grains on diagnosis and 10 grains three times a day later, for at least ten days, was then established. This noticeably diminished the number of recurrent cases among the Americans, but not sufficiently among the poorly nourished European laborers. Forty-five grains per day, in doses of 15 grains each, has practically eradicated recurrent malaria among the Americans, and to a large extent among the European laborers.

36. **Inhibitive Action of Bile on B. Coli.**—Jordan's observations show that bile inhibits at least from one-third to one-half of the viable cells of *B. coli* and sometimes a much larger proportion; that freshly isolated cultures are inhibited

in at least the same degree as those under long cultivation or those subjected to prolonged sojourn in water; that there is no evidence that *B. coli* cells that are unable to grow on bile medium are any more "attenuated" or less "vigorous," biologically, than their fellows, and that with some care in making dilutions and replating if necessary *B. coli* will be isolated in a larger proportion of cases from lactose broth fermentation tubes than from lactose bile. These facts may not modify the advantages claimed for bile media for presumptive tests but they do demonstrate that bile is an inhibiting substance for *B. coli* as for other micro-organisms and that its use always involves the suppression of a certain number of viable cells. The cells that are suppressed cannot be assumed to be any less significant in the interpretation of sanitary water analyses than the cells actually surviving the passage through bile.

38. **Specificity of Anaphylaxis Reaction.**—From the results of experiments made by Wells and Osborne it seems probable that the entire protein molecule is not involved in the specific character of the anaphylaxis reaction, but this is developed by certain groups contained therein, and that one and the same protein molecule may contain two or more such groups. These experiments also demonstrate that the "group reactions," characteristic of biologic reactions between closely related species, which usually have been interpreted as indicating the presence in related organisms of identical as well as distinct proteins, can really be exhibited by single isolated proteins from related organisms. In other words, biologic relationship and chemical relationship seem to be much the same. Attention is also called to certain other observations: (a) that animals sensitized with two proteins will, as is well known, react with either, and that after recovery from reaction with one protein the reaction given with the second protein is less severe than it would be if the animal had not already passed through an anaphylactic intoxication; (b) that after injection with an intoxicating dose of a vegetable protein, another injection with the same protein twenty-four to seventy-two hours later, when the animal is usually insusceptible, so far as constitutional symptoms are concerned, often produces a severe, transient peritoneal irritation, which seems to be in the nature of a specific local reaction.

40. **Experimental Streptococcal Arthritis.**—The changes in the joints of rabbits inoculated with hemolytic streptococci were studied by Jackson after periods of four, five and seventy days; those produced by *Streptococcus mucosus* at the end of ninety-five days, and the joint changes caused by streptococcus viridans at the end of 136 days. The largest number of joints studied were from the rabbits inoculated with streptococci isolated from human lesions produced by the milk epidemic. These animals died or were killed after periods of two, four, ten and twenty-four hours and two, three, four, seven, eleven and thirteen days. The alterations described depend on the early and apparently simultaneous and independent localization of the bacteria in the joint cavity, in the tissues surrounding the blood-vessels of the synovial membrane, plica synovialis, tendon sheaths and blood-vessels of the periosteum and bone-marrow near the epiphyseal cartilages. The rather extensive involvement of the peri- and parasynovial structures such as tendon sheaths, epiphyseal cartilages and bone-marrow is perhaps more marked than has been described by others.

The nodular formations developing in the tissues about the joints are essentially similar to those described in the myocardium of some of these same animals and constitute a feature of the healing or later stages of the inflammation produced not only by *Streptococcus viridans* but also by the streptococcus from the epidemic. Of two points deserving special mention, one is the vulnerability of the triangular, loosely constructed fibro-areolar tissue projecting into the joint laterally, the so-called plica which contains varying amounts of adipose tissue. It may be that the spirally arranged blood-vessels here offer exceptional opportunities for the lodgment of bacteria or are as much end vessels as those next to the epiphyseal cartilages. The other point concerns the influence on the character of the inflammatory process exerted by the peculiarities of joints in that they are at the same time free surfaces and closed cavities. Jackson suggests that these features contribute in ways we do not fully understand to the results of infection, especially the absorption of inflammatory exudates and the extent to which healing is possible.

41. **Interrelations in Streptococcus Group.**—The data in Davis' paper are arranged in such a way as to indicate a biologic classification of members of the streptococcus group. Hemolysis, growth on blood-agar, capsule formation, solubility in bile, sugar reaction, pathogenic properties in animals and anaphylactic reactions are considered. Transformation of one member into another within certain limits appears to be a not uncommon phenomenon.

42. **Droplet Infection in Diphtheria.**—In talking and coughing, diphtheria patients frequently emit droplets containing viable diphtheria bacilli, but they emit such droplets usually in small numbers only. Patients with laryngeal diphtheria apparently do not throw out many more droplets containing diphtheria bacilli than do pharyngeal cases. In agreement with this observation, it was found by Teague that after swabbing the larynx with a suspension of *Bacillus prodigiosus*, no more droplets containing this bacillus are thrown out in coughing and talking than after swabbing the pharynx and mouth. The diphtheria bacillus is much more resistant to death from drying than *Bacillus prodigiosus*. Hence, the former would tend to remain alive in suspended droplets longer than does *Bacillus prodigiosus* in the numerous series of experiments in which it has been used. It is pointed out that bacteria in suspended droplets would remain alive much longer in poorly heated tenements during cold weather than is indicated by laboratory experiments performed at higher temperatures. It is believed that the data furnished by these experiments will be of aid to the epidemiologist and to the sanitarian in arriving at a correct estimate of the importance of the part played by droplet infection, as compared to other modes of infection, in causing the spread of diphtheria.

46. **Meiostagmin and Epiphanin Reactions.**—A decidedly negative meiostagmin reaction, Burmeister claims, is of more value than a positive one and may be considered of some weight in ruling out carcinoma. A moderately or even strongly positive reaction is not necessarily indicative of malignant tumor. The epiphanin reaction is valueless in the diagnosis of malignant tumors. The range of error determined by the blind titrations in a measure also explains the results obtained by other workers who have employed this reaction in the diagnosis of diseases other than carcinoma.

Journal of Nervous and Mental Disease, Lancaster, Pa.

May, XL, No. 5, pp. 289-360

49 *Aborted Forms and Preparalytic Stage of Acute Poliomyelitis as Observed in Buffalo Epidemic. E. A. Sharp, Buffalo.
50 Mirror Writing and Other Associated Movements Without Paralysis. C. W. Burr and C. B. Crow, Philadelphia.
51 Cerebellar Tumor; Glioma; Operation; Recovery. M. Mailhouse and W. F. Verdi, New Haven, Conn.
52 Experimental Studies on Nervous Mechanism in Production of Hyperplasia. W. Timme, New York.

49. **Aborted Forms of Acute Poliomyelitis.**—Summarizing the findings in twenty-nine cases and comparing them with the suspicious cases and the remainder of the paralytic cases observed during the epidemic, Sharp found that all grades of transition occur from the mildest gastro-intestinal or simple febrile disturbances to the severe paralytic and rapidly advancing fatal cases. While the majority of the cases observed during the epidemic conformed to the regularly recognized types of the disease, transitional and mixed types were not uncommon. Sharp says that until some reliable diagnostic criterion can be found, based on chemical, bacteriologic or other laboratory evidence, the etiology of many of the febrile disturbances of early life must remain questionable. That some of these are produced by the virus of poliomyelitis appears highly probable.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May, IV, No. 5, pp. 363-451

53 *Pharmacology of Respiratory Center. A. R. Cushny, London.
54 *Factors Determining Tolerance of Glucosids of Digitalis Series. A. J. Clark, London.
55 Pharmacology of Snake's Heart. A. J. Clark, London.
56 Relation of Vascular Conditions to Pituitrin Diuresis. R. G. Hoskins and J. W. Means, Columbus, Ohio.
57 Saline Perfusion of Respiratory Center in Frogs: Effect of Calcium Chlorid and Potassium Chlorid. E. R. Hooker, Baltimore.

53. Pharmacology of Respiratory Center.—The drugs examined by Cushny—morphin, chloral, urethane, caffein and strychnin—affect the frequency of the respiration more constantly than the depth; and as a general rule the change in the frequency is in the opposite direction to that in the depth. Thus the three depressants, morphin, chloral and urethane, tend to slow and deepen the respiration, while strychnin and caffein quicken it and render it shallower. But considerable changes in the rate may occur under all these drugs without any significant change in the depth. The reaction to CO_2 is altered in the same way as the respiration in air. For here again the chief alteration is shown in the frequency, while the depth is comparatively little changed. The view that the normal activity of the respiratory center is dependent on the CO_2 hormone thus receives support from these experiments in which drugs that reduce the normal rate of respiration also lessen the reaction to CO_2, and similarly drugs that increase the normal rate of respiration augment the reaction to CO_2.

As regards the nervous control of the respiration, those drugs that accelerate the breathing render the inhibitory reflexes less efficiently, while the depressants facilitate inhibition. An analogy may be drawn between the effects of poisons and those of changing the number of afferent stimuli. For example the respiration of profound morphin poisoning resembles in so many features that after section of the vagi, that it suggests that morphin may act by cutting off afferent stimuli from the center. But the poisons investigated have not proved to possess any very striking action on the passage of impulses to the center and such changes as are observed in the effects of reflex excitation regards rather the result of the changes in the center than the essential cause of these changes. The effects of drugs on the respiration therefore cannot be assigned wholly to either factor in the regulation. The relation of the hormone to the center is altered under drugs but only as regards the rate. Change in the nervous control occurs but also fails to account for all the features observed. The essential character of the respiratory center is its power of rhythmic discharge under a constant stimulus from the presence of CO_2. The frequency of the rhythm and the strength of the impulses emitted, may be altered by variations in the CO_2 tension and also by nervous influences, but the essential rhythmic power persists.

Drugs quicken or slow the rhythm without necessarily altering the strength of the impulses sent out at each active phase; in other words, the rapidity of the anabolism in the center is changed by drugs but the strength of the catabolic discharge which occurs when the critical point is reached, is unchanged by them except in as far as they change the CO_2 tension indirectly. Thus the changes in the respiration under poisons cannot be attributed exclusively to altered susceptibility either to the hormone or to nervous impulses, but rather indicate a more fundamental action on the rhythmic process on which both of these influences act. This change in the rate of the anabolism affects the response to CO_2, which induces greater or less acceleration according as the anabolism is promoted or retarded. The afferent nervous impulses are also influenced, but the strength of the impulses emitted are changed only indirectly.

54. Tolerance of Glucosids of Digitalis Series.—The experiments described by Clark were undertaken to determine by what mechanism tolerance is established in the snake and the rat, to glucosids of the digitalis series—"the cardiac glucosids." He found that the common grass snake *Tropidonotus natrix*) is very tolerant of strophanthin; this tolerance is due to tissue immunity, strophanthin having little effect on the isolated heart; a similar immunity, due to the same cause has been shown by other writers to exist in the toad and the rat. There is no evidence that any tissue of the animals tested (frog, snake, rabbit and rat) has any power to destroy strophanthin. There is no evidence that the heart muscle of any of the above animals can specifically absorb strophanthin. In the frog, rat and rabbit the liver has no power to absorb strophanthin. The red blood-corpuscles of the frog in the presence of plasma possess the power of absorbing small quantities of strophanthin, but the mammalian blood has no such power.

Kansas Medical Society Journal, Kansas City

May, XIII, No. 5, pp. 183-224

58 Tabes Dorsalis and Allied States: Three Clinical Cases. A. L. Skoog, Kansas City.

Medical Record, New York

May 31, LXXXIII, No. 22, pp. 967-1012

59 Clinical Evidence of Lymphuria. H. Stern, New York.
60 Colon Bacillus Infection of Kidney. W. Ayres, New York.
61 Prostitution in New York City: Study in Social Hygiene. D. C. McMurtrie, New York.
62 Case of Addison's Disease with Severe Abdominal Symptoms. L. S. Milne, Rosedale, Kan.
63 Angioneurotic Edema. J. M. Lobsenz, New York.
64 Study of Flaccid Spinal Paralysis which Attacked Louis Pasteur in Early Maturity and Its Similarity to Attack of Acute Epidemic Poliomyelitis. J. V. Manning, Brooklyn.
65 Plea for Early Laparotomy in Abdominal Diseases. A. Goldman, New York.
66 Venereal Diseases in Negro, with Special Reference to Gonorrhea. J. O. Rush, Mobile, Ala.
67 Simple and Satisfactory Method for Removing Adenoids and Tonsils. W. W. Carter, New York.

New Mexico Medical Journal, Las Cruces

May, X, No. 2, pp. 29-59

68 Lumbosacral Sprain. C. M. Mayes, Roswell.
69 Constipation. S. G. Von Almen, Clovis.
70 Psycho-Epilepsy. C. F. Beeson, Roswell.
71 Carcinoma of Mamma. S. D. Swope, Deming.

New York Medical Journal

May 24, XCVII, No. 21, pp. 1061-1112

72 Nitrous Oxid Gas, Essence of Orange Ether and Sequestration in General Anesthesia for Operations in Upright Position. T. R. French, New York.
73 Recovery in Case of Influenzal Meningitis Complicated by Pneumonia. T. E. Satterthwaite, New York.
74 *Should Internship Be Required? I. Dyer, New Orleans.
75 Meniere Symptom Complex. S. J. Kopetzky, New York.
76 Direct Laryngeal Examination. J. A. Pratt, Aurora, Ill.
77 Enhancing of Auditory Acuity by Psychologic Methods. W. J. W. A. Maloney, New York.
78 Treatment of Tuberculosis. A. B. Jackson, Philadelphia.
79 Sexual Problems of To-Day. B. S. Talmey, New York.
80 Case of Total Deafness Following Dose of Quinin. M. J. Ballin, New York.
81 Gastroptosis and Coloptosis Transversa As Seen from Post-Mortem Examinations. K. M. Lynch, Philadelphia.

May 31, No. 22, pp. 1113-1164

82 *Restoring Mobility after Bony Ankylosis of Joints. R. T. Taylor, Baltimore.
83 Care of Tuberculous Employees by Corporations as Employers. A. H. Doty, New York.
84 Philosophy of Preventive Medicine. A. C. Reed, New York.
85 Hospital Uranalysis. V. C. Myers, New York.
86 Enchondroma of Scapula. W. D. Miningham, Newark, N. J.
87 Pylorospasm with Gastric Tetany, Cured by Gastro-Enterostomy. R. L. Pitfield, Philadelphia.
88 Mitral Stenosis. M. Schulman, New York.
89 Old Method of Treatment of Syphilis Versus New. M. B. Parounagian, New York.
90 Three Cases of Epidemic Septic Sore Throat in One Family. M. B. Gordon, New York.
91 Care and Aftercare of Consumptive. B. S. Horowicz, New York.
92 Acute Intestinal Obstruction. R. A. Barr, Nashville, Tenn.
93 Successful Treatment of Atrophic Rhinitis and Ozena. L. Jacobs, New York.

74. Abstracted in THE JOURNAL, March 22, p. 934.

82. Restoring Mobility after Bony Ankylosis of Joints.—Taylor cites seven cases of ankylosis in which he injected his mixture of yellow wax, 1 part, and lanolin, 5 parts, melting at about 130 F., with a considerable degree of success.

Ohio State Medical Journal, Columbus

May, IX, No. 5, pp. 207-264

94 Relation of Accessory Cavity Disease to Eye and Orbit. J. E. Brown, Columbus.
95 Pruritus Ani. S. Englander, Cleveland.
96 Thymus and Combination of Thymus-Hyperplasia with Basedow's Disease. A. Elsaesser, Youngstown, Switzerland.
97 *Tuberculin in Treatment of Genito-Urinary Tuberculosis. C. A. Coleman, Dayton.

97. **Tuberculin in Genito-Urinary Tuberculosis.**—Inasmuch as tuberculosis of the urogenital tract differs very little from tubercular infections located elsewhere in the body, Coleman says it would be useless to outline what cases should or should not receive tuberculin injections, except that one must differentiate between operable and inoperable cases. The pathologic changes must be considered whether extremely acute or actively progressive, also, the general condition of the patient. If there is a persistent temperature of over 100 F., night sweats, chronic diarrhea, progressive loss of weight and extensive involvement of tissue, tuberculin injections are contra-indicated. In administering tuberculin Coleman considers it a very good rule to continue the entire course of treatment without changing the source of supply, as he has found that two concentrated solutions having the same strength or standardization but from different manufacturers varied in specific gravity, color and physical properties. He also prefers to give the injections subcutaneously, preferably between the scapulae.

Dilutions are made up fresh each day, using one-half of 1 per cent. phenol as diluent. He begins with a minimum dose of 1 c.c. of one-one-hundred-thousandth dilution and increases the dose 1 c.c. each following injection until a reaction is evident. Injections to be given every fifth day unless a prolongation of temperature ensues or increased local or general reaction. After reaction is manifest, that is, rise in temperature not to exceed two degrees above temperature of patient before injection, no increase of dose is made until the reaction inducing dose has been twice repeated without producing a rise of temperature, so that in each injection that again induces reaction, the dose must be tolerated twice before further increase is attempted. The maximum limit is regulated according to the necessity of the case. Do not stop injections until long after all symptoms have subsided; also, do not discontinue the injections of tuberculin too suddenly as rather severe relapses may follow. All other lines of treatment must be used in conjunction with tuberculin therapy. Proper hygiene, in the way of an out-of-door life, fat-producing foods, rest and everything that will aid in restoring health are absolutely essential.

Coleman reports three cases and has had under observation during the past eighteen months twenty additional cases as follows: Fourteen cases of tuberculosis of kidney, thirteen being unilateral and one bilateral; ten of them operable, four inoperable (three of the latter due to extensive pulmonary involvement and one due to both kidneys being affected). Six cases of tuberculosis of epididymis, two cases being operated on; three cases of early infection, one inoperable due to extensive pulmonary involvement. Fifteen of these patients have received tuberculin injections with the following results: 28 per cent. apparently cured, 49 per cent. improved, 12 per cent. unimproved, 11 per cent. not under treatment sufficient time to draw conclusion.

He summarizes his views as follows: There is no spontaneous cure for tuberculosis of the kidney. Tuberculin will not cure but will be a valuable adjunct combined with other methods of treatment. Operable cases of renal tuberculosis are not suited to tuberculin injections, but early cases, in which we can positively find tubercle bacilli without suppuration or impairment of the functional activity of the kidney, are suited to treatment by tuberculin until such time as symptoms present indications for nephrectomy. Tuberculin treatment certainly is worthy of recommendation in cases of renal tuberculosis following nephrectomy when morbid foci still remain in the urinary tract or in other organs. Early involvement of the lower genital tract is certainly improved by tuberculin therapy, although any influence exerted on the morbid focus in the sense of a cure has not been demonstrated. Inoperable cases are scarcely influenced by tuberculin, but, in the absence of other therapeutic means, may be tried; also certain isolated cases will not respond to a reaction of tuberculin and may therefore be carried on without injury to the patient. Tuberculin should not be employed promiscuously as a matter of experiment. If you do not possess a definite knowledge of the physiologic action of tuberculin the treatment is purely empirical. Do not think you can follow the directions given out by manufacturers relative to the regulation of dosage, or depend on the serial dilutions as a method of standardization. If you do, your results will certainly be far from satisfactory. The patient must be closely observed, results accurately tabulated, the effects of a regulated administration of tuberculin noted and from such histories much valuable information can be obtained.

Ophthalmic Record, Chicago

May, XXII, No. 5, pp. 23-290

98 Analytic Consideration of Symptoms of Eye Strain with Special Reference to Those Symptoms Cited to General Practitioner. J. R. Newcomb, Indianapolis.
99 Intra-Capsular Operation for Cataract after Method of Professor Stanculeanu, Bucarest. W. L. Simpson, Memphis, Tenn.
100 Eye Unconsciously Injured. S. Mitchell, Hornell, N. Y.

Public Health Journal, Toronto

May, IV, No. 5, pp. 267-344

101 Value of Playgrounds to Community. J. A. Riis, New York.
102 School Clinics. L. H. Guest, Blackfriars, London.
103 Health Visiting in American City. E. Detwiler, Richmond, Va.
104 Relation of Hospital for Mental Diseases to Community. E. H. Young, Kingston, Ont.
105 Eugenics: Sordid, Scientific Side of Life. A. P. Reid, Nova Scotia.
106 Constructive Program for Housing Reform. M. Chadsey, Cleveland.
107 Philosophy of Mastication. G. M. Niles, Atlanta, Ga.
108 Occupational Diseases. H. B. Blakey, Columbus.
109 Disinfection and Disinfectants. F. Schneider, New York.
110 Plants for Rock Garden. R. R. Todd, Toronto.
111 Dry Closets. J. S. Dunn, Kimberley, South Africa.
112 Dust Prevention by Use of Palliatives. A. H. Blanchard, New York.
113 Foot and Mouth Disease. D. G. Collins, Toronto.

Vermont Medical Monthly, Burlington

May, XIX, No. 5, pp. 105-130

114 Recent Experimental Work with Cancer Ferments. C. F. Ball, Rutland.
115 Effects of Alcohol When Used as Medicinal Agent. D. Marvin, Burlington.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Clinical Journal, London

May 7, XLII, No. 5, pp. 65-80

1 Diagnosis of Primary Intrathoracic Malignant Disease. W. H. M. Telling.
2 Causation and Treatment of Gastric Hyperacidity. J. M. Fortescue-Brickdale.
3 Reflections Suggested by Bladder Case. F. W. Langridge.

May 14, No. 6, pp. 81-96

4 Pelvic Cellulitis. J. B. Hellier.
5 Conditions Simulating Appendicitis. H. W. Carson.

Medical Press and Circular, London

April 30, XCV, No. 3860, pp. 459-484

6 Procedure for Reduction of Dislocation of Shoulder. M. Marcille.
7 Fixation of Subcuticular Sutures. W. Pearson.
8 Evolution of Epidemics: Present-Day Scientific Evidences of Evolution. J. T. C. Nash.
9 Integration and Disintegration of the Personality. (To be continued.) H. Campbell.

May 7, No. 3861, pp. 485-510

10 "Shock" During Anesthesia. J. D. Mortimer.
11 Case of Acute Septicemia Due to B. Pyocyaneus. J. M. Clarke.
12 Paratyphoid Fever. J. Hay.
13 Integration and Disintegration of the Personality. H. Campbell.

May 14, No. 3862, pp. 511-536

14 Chronic Joint Disease. D. Power.
15 Diseases of Skin in Relation to Cardiovascular Disturbances. D. Walsh.
16 Balsam of Peru: Historical Note. J. Knott.

17 Medical Gymnastics Considered as Prelude to Physical Education in Treatment of Mentally Deficient Children. E. F. Cyrlax.

Quarterly Journal of Medicine, London

April, VI, No. 23, pp. 293-434

18 *Use of Oxydase Reaction in Differentiation of Acute Leukemias. J. S. Dunn.
19 *Investigations on Gastric Juice in Malignant and Non-Malignant Diseases of Stomach and Duodenum. S. B. Schryver and C. Singer.
20 *Quantitative Estimation of Amylolytic Ferments in Urine as Measure of Certain Pathologic Conditions. D. Corbett.
21 "Osler's Sign" and Certain Cutaneous Phenomena Sometimes Associated with Heart Disease. F. P. Weber.
22 *Four Cases of Fulminating Pneumonia from a Public Institution. E. Glynn.

18. **Oxydase Reaction in Acute Leukemias.**—The occurrence of a positive indophenoloxydase reaction in large non-granular cells in acute leukemia Dunn regards as certain proof of their myeloid nature, and allows a diagnosis of acute myeloid leukemia to be readily made from blood-examination. The oxydase reaction is negative in the more embryonic forms of marrow-cells. It is always negative in small myeloblasts, and is probably always negative in the most typical stage of large myeloblasts with uniformly dense basophil reticular protoplasm. When it falls positive in these large non-granular cells it is associated with alterations in the protoplasm which are recognizable by ordinary staining methods, and which indicate stages of ripening toward the granular myelocytes. Cases of acute myeloid leukemia may occur in which the type of blood-formation is so embryonic that the oxydase reaction is valueless for differential diagnosis, but even in such cases the histologic characters of the large leukocytes may render a diagnosis possible. He reports three cases.

The onset and course of the first case were not those of the most acute forms of leukemia, and though serious symptoms existed only for four months, Dunn suggests that it is possible that leukemic changes in the organs had been present with subleukemic blood-picture for some time previously. However, the rise in the number of leukocytes in the circulation occurred with great rapidity, from normal limits to over 200,000 per cubic mm. in ten days' time, and the leukocytes present showed very embryonic characters, as nearly 90 per cent. are, in Ehrlich's sense, non-granular. Examination of the blood by ordinary staining methods suggested that these non-granular cells were myeloblasts, and that the myelocytes were developing from them. A certain proportion of typical myeloblasts such as Naegeli described were present, and an unbroken chain of transitional forms was observed between these and the granular myelocytes. The oxydase reaction was positive in the great majority of these cells and positive in greatly varying degree in different examples, a fact which, Dunn says, confirms the idea that transitional forms of many varying degrees of maturity are represented. The histologic examination of the organs showed that the type of blood-formation was myeloid, as described by Schultze, and the myeloid nature of the deposits was again fully confirmed by the positive oxydase reaction.

The second case presented a typical picture of acute leukemia. Its brief course was marked by hemorrhages into the skin and from the mucous membranes, by fever, and by ulcerative gingivitis. The lymph-nodes were not enlarged. The blood-picture showed a considerable increase of leukocytes, of which the great majority were large non-granular cells. These presented the typical characters of Naegeli's myeloblasts, and transitional forms between them and myelocytes were present, though scanty. The oxydase reaction conclusively proved the myeloid nature of a certain proportion of these, which differed from the others only by a slight alteration of the protoplasm indicative of ripening. The absence of the reaction from the majority of them Dunn explained by their very embryonic character rather than by pathologic suppression of a function already developed. T corresponded accurately with the first type of mye described in the first case which also gave negative o reaction. The type of the blood-formation in the m in the pulp of the spleen, and in the medullae of lymph-and the atrophy or inactivity of the lymph-nodes, he says, were confirmatory of the view, based on the blood-examination, that the case was one of acute myeloid leukemia.

This case differed from the first case not only in being more acute and of more embryonic type, but also in showing much less advanced changes in the organs. In the cervical lymph-nodes, for example, there was little enlargement, and the condition of leukemic infiltration was at an early stage, which rendered possible some observations on its mode of occurrence. It was seen that the lymphatic tissue remained indifferent and was composed of small lymphocytes: the myeloblasts were most numerous in the sinuses and in the neighborhood of these: one or two foci of more massive development of myeloblasts which were present were also in the neighborhood of the sinuses. (Similar foci were observed in spleen and in mesenteric lymph-nodes.) These appearances, so far as they go, were in favor rather of the metastatic origin of the myeloid tissue than of the metablastic development of it from cells previously present in the organs.

In the third case the Jenner and triacid counts gave almost identical figures: 97 per cent. of non-granular and 3 per cent. of granular cells, and the oxydase reaction was negative in all but the granular cells. Accordingly, this reaction gave no indication whatsoever of the occurrence of transition between the two series, and so far as it goes the nature of the non-granular cells remains in doubt. The leukocytes presented perfectly definite myeloid characters; they corresponded in every detail with those described in the second case. The only differences recognizable between the blood-pictures in these two cases were the smaller percentage of granular cells, 3 per cent. in place of 6 per cent., and the less frequent occurrence of definite transition forms such as cells with looser reticulum or with metachromatic violet granules. Absolute proof of the myeloid nature of the case was impossible in absence of histologic examination of the blood-forming organs, but the characters of the cells seem too definitely those of Naegeli's myeloblasts to render possible any other explanation. This case Dunn would therefore regard a representing stage of embryonic blood-formation at which the value of Schultze's oxydase reaction as a test for myeloblasts breaks down.

19. **Gastric Juice in Malignant and Non-Malignant Diseases.**—The authors state emphatically that all methods of estimating the chlorid-secreting activity of the stomach by examination of gastric juice contain sources of error beyond experimental limits. A proportion of "secreted chlorid" is always in combination with the amino-acid groupings of the digestion products in the form of hydrochlorids. Hydrochloric acid as it is secreted enters, either partly or wholly, into combination with the products of digestion. The amount thus combined depends on the amount and character (e. g., degrees of digestion) of these products. An index as to the amount and character of these products is furnished by the nitrogen estimations and determination of the "nitrogen factor." "Secreted chlorid" (i. e., total chlorid less inorganic chlorid) is the best available index of gastric efficiency as regards hydrochloric acid. The "peptic index" and the "nitrogen factor" are also valuable indications of gastric efficiency. The amount of "secreted chlorid" and the "peptic index" usually vary in parallel fashion. Departures from this rule are, however, frequent, but almost always in the direction of a relative depression of the peptic index.

The most satisfactory metho assifying gastric juices
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depressed. In other cases the secretory activity is high. The "peptic index" did not appear to rise above normal in any case of ulcer of the body of the stomach. The characteristics of the gastric juice obtained from cases of duodenal and pyloric ulcer are capable of explanation as the result of a vicious circle, of which preternatural excitation of the pyloric and duodenal mucous membrane, stimulation of the chemical mechanism of gastric secretion and increased secretion are the links.

The analytic distinctions that prevail between ulcer of the body of the stomach and ulcer of the pylorus are also found in carcinoma of the same two regions. Hyperchlorhydria or at least euchlorhydria is common in carcinoma of the pylorus, but is not found in carcinoma of other parts of the stomach. It is therefore probable that the changes in the composition of the juice depend rather on the site than on the nature of the lesion. Carcinoma of the stomach has no specific effect on the composition of gastric juice, although both pepsin and chlorid readings are generally lower than in other conditions. In alcoholism the "peptic index" is depressed while the chlorid secretion remains normal or only slightly depressed. In some cases the chlorid secretion is raised. With visceroptosis and notably nephroptosis there is a general depression of the gastric functions. At the same time the "nitrogen factor" is raised. The same results are associated with an atonic gastric wall. Hyperchlorhydria, hypochlorhydria, and even achylia are encountered, independently of coarse gastric lesions. The coincidence of a definite hyperchlorhydria with a greatly raised "peptic index" (80 and over) is practically diagnostic of pyloric and duodenal ulcer among gastric diseases. Such cases, however, must be carefully distinguished from certain cases of chronic appendicitis in which no coarse gastric lesion is discernible. Very low chlorid readings (e. g., secreted chlorid below 3.0) practically exclude pyloric or duodenal ulcer. A "nitrogen factor" of 2.8 and over has been found to be almost diagnostic of delayed emptying of the stomach. Dissociation of chlorid and pepsin secretion the authors believe to be probably the result of chronic inflammatory change in the gastric mucous membrane.

20. **Amylolytic Ferments in Urine.**—Corbett found that a starch-reducing ferment is excreted in the urine of normal individuals. The amount passed per twenty-four hours is fairly constant, varying when measured by Wohlgemuth's short method between the values of 6.6 and 33.3 units, the average being 10 to 20. Each unit represents 1 c.c. of 0.1 per cent. starch solution converted into dextrine in half an hour by 1 c.c. of urine. This ferment is also present in normal blood-serum, which has, when examined by an equivalent method, an average value of 10 units. This method of quantitative estimation is reliable, the values found in urine being unaffected by ordinary changes of diet in adults, by the reaction of the urine, the presence of bacteria, or any other abnormal constituent except blood. Nor is the activity of the ferment diminished to any important extent by keeping for many weeks, provided that the urine is preserved with toluol. In an infant fed exclusively on milk, the amount of ferment excreted was very small. This rose at once with the administration of a starch-containing food.

An examination of twenty-four hour specimens of urine yielded results which can be divided into two main classes: (a) As a direct measure of the efficiency of diseased kidneys. (b) As a measure of the amount of ferment which has entered the blood. As regards (a), certain reservations are necessary. It is probable that where there is a considerable amount of albumin passed, there is some leakage of ferment which has required no renal activity for its elimination, so that the values found might be misleading. Therefore, the diastase content of the serum should be also examined on more than one occasion, and the ratio of serum of urine compared. Where the *d* value of the serum constantly exceeds that of the urine, it may be assumed that there is a considerable loss of renal efficiency. Where the albumin is scanty or absent the values for the urine when compared with the normal can be taken as a more accurate indication of the amount of damage to the kidney, although here also observations on the serum as well would give more accurate information. As regards (b), where the kidneys were undamaged and the ferment in the blood abnormally large the readings of *d* in the urine were much higher than those for the serum, showing that it is rapidly eliminated by healthy kidneys.

Such readings can be taken as a measure of the amount of ferment which has entered the blood. At the same time, in certain cases of eclampsia the kidneys were damaged, as evidenced by the large amount of albumin passed, and yet high readings were found in the urine. The *d* values for the serum were not worked out on these cases, but granted that there was an excess of ferment entering the blood, one might conclude that the ferment came through the kidneys with the albumin. High readings in the urine were never found in pure cases of renal disease; they were either normal, subnormal or zero. Values up to 100 units were found in certain acute infective conditions without pronounced renal damage, but the only readings found above this mark were those in the urines from cases of pancreatic disease, certain forms of eclampsia, and one case of "acidosis" in a child. The readings found in some of these cases were so high as to distinguish them from any other pathologic condition examined. All the cases of undoubted pancreatic disease, two being verified by operation and one by microscopic examination, gave high readings whether due to malignant or inflammatory processes. It is, therefore, likely that in certain forms of the toxemia of pregnancy the pancreas is involved.

Corbett believes that the test may, therefore, be a valuable help in the diagnosis of these conditions. In diabetics on strict treatment subnormal readings were generally found, and large alterations in the total amount of urine or sugar passed per twenty-four hours had little or no effect on the *d* values. In severe cases the readings were lower than in the milder forms, although in view of the excessive dilution of the urine the total amount of ferment excreted was well within normal limits.

22. **Four Cases of Fulminating Pneumonia.**—Fifteen cases of atypical pneumonia occurred during two mild epidemics in a Liverpool public institution; in seven the pneumococci were looked for and demonstrated. The four fatal cases cited by Glynn were of a fulminating type, two deaths occurring about seven hours, and two about thirty hours after the first symptom. The two boys dying in about seven hours showed, apart from congestion, no macroscopic, and so little microscopic evidence of pneumonia, that but for the demonstration of the pneumococci in the lung alveoli, the cause of death would not have been discovered. In both the infection was primarily a respiratory one, involving the lung tissue, and had hardly developed into a pneumococcal "septicemia." In both the organisms had produced profound degeneration of the kidneys, thrombosis and hemolysis in the vessels of the lung and kidney, and the deposition of blood-pigment not only in the lung and kidney tissue and in the thrombi, but also in some of the leukocytes in vessels in which thrombosis had apparently not occurred. In the two boys dying after about thirty hours' illness, consolidation was evidently beginning in the lungs of one, while those of the other contained a small patch of pseudolobar pneumonia. Pneumococci were demonstrated in both instances. Clinically all the cases were rather atypical on account of the prominence of gastro-intestinal or cerebral symptoms, and the small amount or absence of consolidation. There is not sufficient evidence to determine whether the atypical nature of the infections was due to some unusual character of the pneumococci as suggested by the thrombotic and hemolytic effects which occurred in two cases, or to some predisposition on the part of the patient, perhaps of the nature of status lymphaticus.

Annales de l'Institut Pasteur, Paris

April, XXVII, No. 4, pp. 265-340

23 Experimental Production of Diphtheric False Membranes. (Etude expérimentale des fausses membranes diphtériques trachéales chez le lapin.) G. Faroy and G. Loiseau.
24 Presence of Manganese in Tissues of Vertebrates, Molluscs, Insects, etc. (Recherches sur la présence du manganèse dans la série animale.) G. Bertrand and F. Medigreceanu.

25 Pneumococci Do Not Proliferate in the Blood in Pneumonia. (Etudes sur le pneumocoque. VI.) L. Cotoni.
26 *The Adrenals in Tetanus and Diphtheria. (Glandes surrénales et toxi-infections.) A. Marie.
27 The Microbian Flora of Large Intestine in Cattle and Sheep. II. J. Choukevitch.
28 Negative Results of Research on Changes in Pneumococcus from Passage through Animals. (Etudes sur le pneumocoque. VII.) C. Truche and L. Cotoni.
29 Sporulation of the Aspergillus Niger and Fumigatus. B. Sauton.
30 Destructive Influence on Central Nervous System of Rabbits and Guinea-Pigs of Long-Continued Minute Doses of Intestinal Poisons. S. Wladyczko.

26. **Epinephrin Neutralizes on Contact Tetanus and Diphtheria Toxins.**—Marie reports research in which epinephrin neutralized in the test-tube fifty times the fatal dose of tetanus toxin and five times the fatal dose of diphtheria toxin. It is merely a contact action and does not occur from a distance. Guinea-pigs and rabbits bore without injury injections of the toxins thus neutralized.

Annales de Médecine et Chirurgie Infantiles, Paris

April 15, XVII, No. 8, pp. 237-272

31 Occasional Renal Origin of Hemoglobinuria in Children. Gaujoux, R. Marie and H. Rouèche.
32 *Adrenal Origin of Cyclic Vomiting in Children. (Sur l'origine surrénale des vomissements dits acétonémiques.) E. Terrien.
33 Complications of Scarlet Fever. (Trois cas de scarlatine.) Chateau.
34 Roentgenoscopy of Tuberculosis in Infants. (Diagnostic radiologique de la granulie chez le nourrisson.) L. Ribadeau-Dumas and A. Weil.
35 *Sugar in Uncontrollable Vomiting of Infants. (Etude des propriétés anti-émétiques du lait condensé sucré.) Variot, Lavialle and Rousselot.

May 1, No. 9, pp. 273-308

36 *Pneumonia in Children. E. Weill and G. Mouriquand.
37 Importance of Direct Sunlight in Treatment of Surgical Tuberculosis. (L'héliothérapie.) E. Estor.

32. See Abstract in The Journal April 19, 1913, p. 1266.

35. Ditto, May 10, p. 1498.

36. **Pneumonia in Young Children.**—Weill and Mouriquand call attention anew to the great diagnostic importance of roentgenoscopy in pneumonia in infants. It not only reveals the focus when it exists, but it has shown that there is a special type for the hepatization at this age. They have applied it to fifty-two infants and to 300 older children from 2 to 15. The list includes eight infants less than a year old. Without the aid of the Roentgen rays in many of the cases the pneumonia would not have been recognized. The findings were positive in all but two of thirty-three cases in infants; in thirteen the shadow long preceded auscultation findings. In eighteen cases the right apex was the seat of the consolidation; in six the left apex; in three each, the right and left base. The area was almost invariably triangular with the base in the axilla and cortical area. Roentgenoscopy has done away—for children—with the old conception of a central focus spreading to the periphery. Bronchopneumonia in children never casts a distinct shadow and especially never this triangular shadow.

Roentgenoscopy may reveal the existence of the triangular patch of consolidation without any stethoscope findings for a while, or the latter may be positive and the former negative. They report in detail a number of cases of each type. When the Roentgen rays have localized one of these silent foci, it will sometimes be possible to note that the vesicular murmur at this point is a little fainter than usual. It is possible, however, for the focus to run its entire course without any signs to be discovered with the stethoscope. In one case both types were associated, a little girl of 2½ having a right triangular patch of hepatization revealed by roentgenoscopy alone, giving no sign of its presence on auscultation, while in the left lung there was a patch of pseudohepatization eliciting murmurs and râles but casting no shadow on the screen. This case demonstrates that the true pneumonic focus is not necessarily always at the same spot as the stethoscope positive findings.

Archives Générales de Chirurgie, Paris

April, VII, No. 4, pp. 385-512

38 Fracture of the Internal Tubercle of the Heel Bone. (Fractures de la grosse tubérosité du calcaneum.) P. Soubeyran and A. Rives.
39 Incipient Ectoplacental Epithelioma. Bassal and Clermont.

Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

April, II, No. 4, pp. 321-448

40 Operative Indications with Uterine Cancer. J. L. Faure.
41 The Intersexual Reactions of the Blood in the Horse. V. Le Lorier.
42 The Disadvantages of Conservative Surgery for Ovarian Cysts. Silhol.

Lyon Chirurgical, Lyons

May, IX, No. 5, pp. 461-588

43 Plastic Operation on Muscles for Facial Paralysis. (La méthode *myoplastique dans le traitement de la paralysie faciale.*) V. Gomoiu.
44 Simultaneous Resection of the Stomach and Transverse Colon; Recovery in Four Out of Five Cases. M. Goullioud.
45 Tuberculosis of the Appendix. L. Bérard and H. Alamartine. To be continued.
46 Large Glioma in Frontal Lobe. L. Bériel and C. Gardère.
47 *Syphilis of the Thyroid. M. Favre and P. Savy.

47. **Syphilis of the Thyroid.**—Favre and Savy report the histologic findings in a case the clinical history of which was published last year by Poncet and Leriche. The patient was a woman of 38 who had had a year or so before a swelling in the tibia and later one in the sternum, both of which disappeared under iodid treatment. Then the thyroid became enlarged and of a woody consistency. Only transient benefit was realized from partial removal of the gland, but under renewed specific antisyphilitic treatment, conditions returned apparently to normal.

Presse Médicale, Paris

April 30, XXI, No. 35, pp. 349-356

48 Examination of Patients before an Operation. (L'examen des malades en chirurgie.) H. Hartmann.

May 7, No. 37, pp. 369-376

49 *Hour-Glass Stomach. (L'estomac biloculaire.) T. Tuffier and J. L. Roux-Berger.

49. **Hour-Glass Stomach.**—Several cases are described in detail with radiographs, and attention is drawn to the dangers of the cases in which the lower part of the stomach is much larger than the upper part. A gastro-enterostomy on the upper part would have no effect on the stagnation of stomach content in the lower pocket. For this class of cases it is stated that the technic worked out by Clément and Monprofit provides for ample drainage of both pockets, but no description of it is given in this article.

Archiv für klinische Chirurgie, Berlin

CI, No. 1, pp. 1-289. Last indexed April 26, p. 1332

50 *Experimental Production of Gastric Ulcer. (Zur Entstehung des Magengeschwürs.) M. Katzenstein.
51 *Cholelithiasis in Japan. (Statistische, klinische und chemische Studien zur Aetiologie der Gallensteine.) H. Miyake.
52 *Advantages of Meltzer's Insufflation in Respiratory Paralysis During Operations on the Brain. (Experimente zur Bekämpfung der Athemlähmung bei Gehirnoperationen mittels Meltzer's Insufflation.) E. Unger and M. Bettmann.
53 Acute Suppurative Appendicitis; One Hundred Cases. C. Longard.
54 Chyle Cysts in Little Girl. (Multiple mesenteriale Chyluscysten bei einem 7jährigen Mädchen. Volvulus mit Darmperforation und diffuser Peritonitis. Resectio ilei. Heilung.) K. Poulsen.
55 *Undescended Testicles. (Die Pathologie der Hodenretention.) O. Uffreduzzi.
56 *Cancer of the Appendix. (Carcinoide des Wurmfortsatzes.) E. Müller.
57 Disadvantages of Intravenous Isopral General Anesthesia. (Die intravenöse Isopralnarkose.) N. Beresnegowsky.
58 *Syphilis as a Factor in Callous Gastric Ulcer and Other Tumors. T. Hausmann.
59 *Resection of Entire Knee Leaving only Nerves and Vessels. (Resectio extremitatis inferioris. Das neue Princip in der Knieresection bei ausgedehnter Gelenkaffection.) N. Bogoras.

50. **Cause of Gastric Ulcer.**—Katzenstein gives an illustrated description of several of the sixty-nine dogs on which

he experimented. The results confirm the assumption that gastric ulcer is the consequence of some circumscribed injury of the stomach wall which does not heal because the normal proportions of pepsin and antipepsin have been upset, more pepsin being secreted while there is less antipepsin than normal.

51. **Origin of Gall-Stones.**—Miyake summarizes eighty-six cases of gall-stone and reviews the findings in 191 cadavers, all in Japan. He has encountered choleliathiasis in only 3.05 per cent. of 8.406 necropsies. This is less than half the percentage in Germany, and the sexes were nearly equally involved. He affirms that the comparative rarity of gall-stone trouble in Japan is because less women are affected than in other countries, and this, in turn, he ascribes to the fact that Japanese women do not wear corsets. Cholesterin stones are remarkably scarce in Japan, compared with Europe, probably from the difference between the Japanese and European habits of diet.

52. **Meltzer's Insufflation in Respiratory Paralysis.**—Unger and Bettmann report experimental research to determine whether Meltzer's technic can be applied in the dangerous respiratory paralysis which is a dreaded complication in operations on the brain. Their experiences were extremely favorable and they commend the simple technic with high praise.

55. **Pathology of Undescended Testicles.**—Uffreduzzi's article is concluded. This instalment is devoted to the complications liable to be encountered. It is based on eighty-one cases, his final conclusions being that retention of the testicles is a congenital defect. It seldom occurs alone but with other malformations or developmental defects. The retained testicle in itself does not cause disturbance but complications are frequent, especially hernia, torsion and malignant degeneration. He is convinced that torsion occurs far more frequently than is generally recognized, as only the severer cases compel operative treatment.

56. **Cancer of the Appendix.**—Müller reports five cases of carcinoid of the appendix and the findings in three cadavers. The patients were a girl of 13, two young women and two men of 22 and 49. Cancer of the appendix is generally distinguished by the fact that while the microscope shows carcinoma the clinical course is that of a benign tumor.

58. **Syphilis as a Factor in Gastric Ulcer.**—Hausmann reiterates anew that the syphilitic origin of certain stomach affections frequently escapes discovery. Many of the cases on record of callous ulcer, etc., are in reality merely a syphilitic lesion. Syphilitic stomach affections lead to anacidity, and consequently when the gastric secretion is much reduced, in cases of tumor, a syphilitic origin should be suspected. Chiari has reported a case of boring ulcer in which the syphilitic origin was beyond question, Kuzmik one in which it was probable, and Hausmann has encountered a case of this kind. He urges careful histologic examination to determine a syphilitic as well as a malignant nature when tumor material is sent to a laboratory for examination. Many tumors which have been recorded as sarcomas, especially retroperitoneal tumors, were probably of a gummatous nature. Its detection may require staining with polychrome methylene blue and pyronin methyl green, as the ordinary stains for tumor tissue are not adequate in case of a gumma.

59. **Extensive Circular Resection of Knee.**—Bogoras was able to save the leg in two cases of such extensive disease of the knee that amputation of the thigh seemed the only possible means of relief. He cut out the entire segment into sound tissue above and below the knee, leaving merely the trunk vessels and nerves bridging the gap. He then sutured the parallel planes of the stumps together, with a wire suture on each side, pushing the popliteal vessels and the sciatic nerve up under the muscles of the rear aspect of the thigh in S shape. Although the leg is shorter than its mate, the two young men rejoice in their serviceable limb. Resection of the entire circumference, sparing only the nerve and vessels, permits rapid healing of the even raw surfaces after coaptation. The article is illustrated.

Beiträge zur klinischen Chirurgie, Tübingen

April, LXXXIV, No. 1, pp. 1-303. Festschrift for Reczey of Budapest

60 *Operation for Varicose Veins. (Zur operativen Behandlung der Venektasien der unteren Extremität.) P. Kuzmik.
61 Papilloma or Cancer of the Thyroid; Four Cases. (Der Zottenkropf.) T. v. Verebely.
62 Deformity after Reduction of Congenital Dislocation of the Hip-Joint. (Ueber die nach Reposition von kongenitalen Hüftgelenkluxationen entstandenen Oberschenkeldeformitäten.) M. Horvath.
63 *Ultimate Outcome of Urethral Strictures. (Dauerresultate der verschiedenen Behandlungsarten der Harnröhrenstrikturen.) D. Raskay.
64 *Thrombosis and Embolism after Gynecologic Operations. T. v. Wenczel.
65 The Appendix and Female Genitals. M. Bogdanovitsch.
66 *Abdominal Operations on Children. (Bedeutung chirurgischer Eingriffe in der Bauchhöhle bei Kindern.) D. Balas.
67 Incarcerated Ureter Stones. E. Boross.
68 Bladder Hernia. (Ueber Blasenbrüche.) M. Chudovszky.
69 Undescended Testicles. (Ueber die chirurgische Behandlung der Ectopia testis.) A. Fischer.
70 Operations on the Larynx through the Mouth. (Kehlkopfoperationen auf direktem Wege.) E. Pollatschek.
71 Cancer of the Nose and Accessory Cavities; Nine Operative Cases. (Ueber primäre bösartige Geschwülste der Nasenhöhle und der Nasennebenhöhlen.) J. Safranek.
72 *Passive Hyperemia in Treatment of Inflammation. (Die entzündungswidrige Wirkung der passiven Hyperämiebehandlung.) K. v. Schiller.
73 Otogenic Brain Abscess. (Die Genese, Symptomatologie und operative Behandlung der durch Mittelohreiterung enstandenen Gehirnabscesse.) K. Udvarhelyi.
74 Indications and Technic for Exclusion of the Pylorus. (Pylorusausschaltung.) K. Borszeky.
75 Experimental Resection of the Pancreas and Pancreato-Enterostomy. F. v. Faykiss.
76 Primary Inflammation of the Cecum. (Primäre Typhlitis.) F. Obal.
77 Recent Progress in Plastic Operations. T. v. Mutschenbacher.
78 Frontal Sinusitis; Ten Cases with Suppuration. (Ueber abscedierende Stirnhöhleneiterungen.) K. v. Lang.
79 *Operative Treatment of Rebellious Inflammation of the Bladder. (Die operative Heilung der rebellischen Cystitiden mittelst Blasencurettage und zeitweiliger Blasenfistel.) H. Unterberg.
80 Roentgenoscopy of Hernias. A. Baron and T. Barsony.
81 Appendicitis in Women. J. Fonyo.
82 Actinomycosis of the Appendix. T. Hüttl.
83 Operative Removal of a Non-Malignant Gastric Tumor. (Zur Kasuistik der gutartigen Magengeschwülste.) N. Tyovity.

60. **Treatment of Varicose Veins.**—Kuzmik compares the tedious and extensive operative procedures in vogue for distressing varicose veins and then calls attention to the excellent results he has obtained in ninety-nine cases with a very simple technic. Fifty-six of the ninety-nine patients required the operation on both legs. Recurrence has followed in only three cases. The principle of the technic is to throw a silk thread around the vein at several points in its course without exposing the vein. A day or so before the operation, as the patient stands, the leg is painted with the developer used in photography, and then with a silver nitrate pencil the enlarged veins with all their outlines are lightly drawn on the skin. The mark of the silver pencil turns black under the action of light, and the developer is then rinsed off. The next or the third day the operation is done under general or spinal anesthesia. After shaving and sponging off with ether, the skin is painted twice with a 5 per cent. tincture of iodin. A stout silk thread is then passed under the vein, beginning at the central end, the needle entering and emerging from 0.4 to 0.5 cm. from the edge of the blood-vessel. The needle must be introduced down to the fascia; the thread is tied at once over a little roll of gauze or wick. This spreads the pressure and prevents the thread from cutting through. This procedure is repeated along the vein at about every 5 cm. (2 inches), with care to apply it close to the mouth of every lateral branch. At points where the vein is very much enlarged it is better to make the interval spaces shorter. Healing proceeds without disturbance; the only possible complication is that one or more of the threads may cut through. The patients complain of pain during the first few days after the operation, which may compel small doses of morphin. The blood seems to coagulate in the blood-vessels thus tied off and form thrombi along the walls.

63. **Stricture of the Urethra.**—Raskay has been able to trace to date 130 of 517 cases of urethra stricture since 1893. In

seventeen cases internal urethrotomy was done over ten years ago and the results have been excellent, the permeability of the urethra having persisted unimpaired to date or if the stricture recurred it was readily dilated anew. Excellent results were obtained also with the retention catheter and a course of systematic dilatation. A long interval elapsed before recurrence. With temporary dilatation recurrence was frequent although these cases were of course the mildest form of stricture. The recurrence also proved unusually hard to conquer in this group of cases. The theoretical objections to internal urethrotomy have not been realized in practice. Mishaps are possible naturally with any operation, but internal urethrotomy is as free from danger as any while it entails the least possible loss of time and very little pain or inconvenience of any kind. When the patient cannot spare the time for systematic stretching of the stricture, internal urethrotomy is advisable even in conditions amenable to the systematic dilatation technic. Internal urethrotomy was applied as the routine measure in the cases in which passage of the sound was impossible or there was a tendency to frequent recurrence or the urethra had been undermined by false passages, cicatricial tissue causing an elastic stricture, or when peri-urethral inflammation induced frequent bleeding and absorption and infection were causing a tendency to fever.

64. **Thrombosis after Gynecologic Operations.**—Wenczel reiterates that three factors are involved in the production of thrombosis, some interference with the circulation rendering it sluggish at some point, changes in the vessel walls, and changes in the composition of the blood, causing it to flow more sluggishly. These factors may be combined or one alone may be responsible for the thrombosis. Prophylaxis of thrombosis should take all these factors into consideration before a laparatomy, improving the condition of the blood, toning up the heart and the resisting powers in general. The Trendelenburg position is particularly dangerous on this account as the vessels under the knee are liable to be compressed and interfere with the circulation; other sources of injury are the chilling of the vessels when the abdomen is open, the damage to the vessels in the field of operation, and later the pressure from the paretic distended intestines on the vessels, the rise in blood-pressure from coughing and vomiting, possibly also the hyperleukocytosis, and, last but not least, eventual infection of the wound. Operations for uterine myoma are particularly liable to the above disturbances; even with uterine cancer the heart is never in such advanced atrophy or degeneration as with myoma. Before the heart reaches this stage in connection with uterine cancer the patient has either died or has been cured by an operation. A rapid pulse may be an early sign of a tendency to thrombosis as the heart has to do extra work on account of the obstruction in the vessel. Sometimes the rapid pulse is accompanied by a little rise in temperature. Neither of these are constant nor a sure sign of thrombosis but they should suggest the possibility of it. Another important sign is painfulness at some point along a vein, increased or brought on by pressure, sneezing, coughing, deep breathing, defecation or other exertion. The thrombosis is more readily recognized in the superficial veins; sometimes the inflammation around the vein may be revealed by a red stripe in the skin above. Thrombosis of the vessels in the small pelvis gives few local signs of its presence, at most, edema in the inguinal region and adjoining abdominal wall and tenderness in the vicinity of the inguinal canal; in a few cases the obstructed vessel can be palpated through the vagina or rectum. In case of infection, phlebitis may become manifest. The danger of embolism is most imminent when the valveless veins of the pelvis are involved. It is rare with femoral thrombosis and rarest with thrombosis in the saphenous vein. Embolism follows when the thrombus softens up under the influence of infection, and this is most liable to occur in the pelvic veins. Small incisions, care to prevent postural interference with the circulation and efforts to reduce the injury to the tissues are all useful in prophylaxis, nor forgetting that thrombosis occurs more readily when there has been considerable loss of blood. Little can be hoped from treatment beyond the strictest repose and measures to reenforce the overburdened heart. In 835 laparotomies in the last eight years he had thrombosis in seventeen cases, that is, 2 per cent., with pulmonary embolism in ten. The thrombosis affected women with fever in seven cases, with subfebrile temperature in six and normal temperature in four. The pulse in the cases not complicated with embolism was from 96 to 108; in three pulmonary embolism cases it was 100 or 120, and in seven cases it ran up to 120 or 140. The thrombosis developed in three cases after a merely exploratory laparotomy, and in 4.6 per cent. of the 173 laparotomies for myoma. There was pulmonary embolism in over half of the cases of thrombosis in this group. Thrombosis developed also in one case each in seventy cancer operations on the uterus and in forty-five cases of extra-uterine pregnancy.

66. **Abdominal Operations on Children.**—Balas comments on the marvelous recuperative powers of children which enable them to recover more promptly than adults after abdominal operations, but at the same time they are far more susceptible to shock from the loss of blood, the general anesthesia and chilling of the viscera when the abdomen is opened or the intestines brought out, so that the prognosis depends mainly on these minor points. The diagnosis of appendicitis in children under 4 is sometimes difficult, but differentiation is especially important as pneumonia is liable to develop with symptoms suggesting appendicitis at first: Neglect to operate in appendicitis may prove disastrous, while appendicectomy at the onset of pneumonia might be fatal when the child would have recovered without it. With pneumonia there is not the "abdominal facial expression;" the tongue is moist and not so coated; the respiration rate is accelerated, and the abdominal wall is not so rigid over a circumscribed area as with appendicitis, and deep pressure is not painful although the appendix region may be tender on superficial contact. Broca has reported two cases in children which began with fever, vomiting and severe pains in the ileocecal region but other symptoms developed the thirty-sixth hour to show that the trouble was cerebrospinal meningitis. Digestive derangement may produce a clinical picture simulating that of appendicitis, but rest, abstention from food, purgatives and moist heat to the abdomen will relieve the colic and other symptoms from gastro-intestinal trouble while with appendicitis the tenderness of the region and the rigidity of the abdominal wall persist unmodified. Of great assistance in dubious cases is bimanual examination through the rectum which, he insists, should never be omitted; up to the age of 4 the forefinger can readily reach up above the edge of the small pelvis and palpate the cecal region, the inflamed appendix or the exudate. Balas has had cases of appendicitis in children in which there was no sensitiveness to pressure, the reason being that the appendix in children is longer proportionately than in adults, while the cecum itself lies lower, and thus the appendix extends down into the small pelvis and escapes pressure from palpation. This is the reason why the abscess from appendicitis is generally in the small pelvis in children and why pericystitis is so common. The symptoms from the latter may be the first sign of trouble, and the diagnosis can be cleared up only by palpation through the rectum. Other things being equal—which, however, is seldom the case—the prognosis of appendicitis in children is as good as in adults. Invagination may be differentiated by the palpable tumor, the bloody-mucous stools and the absence of abdominal rigidity. The child should be kept warm, possibly wrapped in cotton, and prepared for an operation. Then under general anesthesia every effort should be made to reduce the invagination, high rectal injections, insufflation of air, and the Hutchinson-Alapi maneuver. If these fail, the abdomen should be opened and the conditions corrected with the simplest and most rapid technic possible. Balas discusses the special features of the six forms of peritonitis to which children are liable and the treatment of each. The advantages of rinsing out the abdominal cavity after a laparatomy are more pronounced, he states, in children than in adults; the warm saline, at 42 to 44 C. induces active hyperemia which augments the resisting powers of the peritoneum and stimu-

lates the intestinal musculature while the peritoneum absorbs enough of the fluid to act as a stimulant for the heart. During the first stage of the affection, when the effusion is still fluid and odorless, rinsing may not be necessary, but after this stage he rinses copiously. Balas believes in draining for children more than for adults. He has repeatedly witnessed that after four or five days during which scarcely any effusion was drained out, a sudden gush of pus came, evidently from some abscess hidden away between the loops of intestines and finally breaking through on the line of least resistance, namely, toward the drain. With tuberculous peritonitis spontaneous recovery under general measures is possible but the healing is facilitated and hastened by a laparatomy. It may not be necessary if the child can have the advantage of sanatorium care and tuberculin treatment. The benefit from the laparotomy is undoubtedly due to the active hyperemia which results. The outlook is best with the form with effusion, worst with the adhesive type. Balas compares the experiences with various abdominal operations on children as reported from a number of different clinics.

72. **Why Passive Hyperemia Has a Curative Influence.**—Schiller describes experiments on animals which have apparently demonstrated that constriction hyperemia owes its healing influence to the fact that leukocytes in the blood thus arrested in the region rapidly succumb in the stagnant lymph as they are especially susceptible. As they die and disintegrate, substances escape from them into the blood and lymph which have a destructive, ferment-like action on the bacteria around. The bacteria are thus killed off, which of course checks the progress of the inflammation, modifies conditions and starts things on the road to healing. The above effects are more pronounced when there is considerable edema, suggesting that the lymph is the main factor involved. The effect of the stasis hyperemia lasts for hours after the constricting band has been taken off, but if the constriction has been too tight none of the above phenomena occurs; the leukocytes are not destroyed and the bacteria are not affected, so that the inflammation continues its course unmodified under excessive passive hyperemia. The constriction should never be applied so tight as to shut off the arterial blood; the venous, passive hyperemia is the aim—the hyperlymphia, as he calls it—and the results are better the more edema there is with stasis hyperemia.

79. **Treatment of Rebellious Cystitis.**—Unterberg has had seven cases of cystitis in which the bladder wall was thick and hard and had lost its power to stretch. Gonorrhea, pregnancy and catheterization are the most frequent causes, but cases are on record in which typhoid, syphilis or furunculosis were responsible for intractable inflammation of this kind. He treats it by scraping away the mucosa through a suprapubic incision, leaving a fistula for permanent drainage and local application of a 1 or 3 per cent. silver nitrate solution. In women it may be possible to curet through the urethra but the outcome is never so satisfactory. The special characteristic finding is that the finger is unable to stretch the small cavity formed by the hard bladder walls. In case the bladder walls have lost all their elasticity, there is no hope even from this treatment; all that can be done is to make a continent fistula through which the urine can be permanently voided and thus relieve the patient from his tormenting tenesmus.

Berliner klinische Wochenschrift

May 5, L, No. 18, pp. 813-860

84 *Treatment of Epilepsy. A. Erlenmeyer.
85 *Camphor in Experimental Bacterial Infection. K. E. Boehncke.
86 The Cholesterin Metabolism. (Untersuchungen und Gedanken über den Cholesterinstoffwechsel.) D. Klinkert.
87 *Unusual Forms of Gastro-Intestinal Hemorrhage. E. Stadelmann.
88 The Chemistry of the Cell. I. (Granoplasma.) P. G. Unna.
89 Influence of the Leukocytes on Anaphylatoxin. W. Spät.
90 The Work Outlined for the Medical Society for Sexology. (Die Aufgaben der "Aerztlichen Gesellschaft für Sexualwissenschaft.") I. Bloch.

84. **Treatment of Epilepsy.**—Erlenmeyer states in the course of this general review of epilepsy that he lays great stress on the circumstances under which the first seizure of all occurred, especially whether it was at night or in the day time. If at night, this suggests certain possible causes, such as overfilling the bladder, emptiness of the stomach, or cicatricial changes in the skull. In any event, inquiry should be made as to physical overexertion, vitiated air and preceding affections, fright, dread, emotional excitement in school or church, quarreling, fighting, etc. In examining epileptics, the size of the skull and the fundus of the eye should not be overlooked. One of his patients had the seizures only in bed and only when he lay on the left side; investigation revealed a tender point on the left side with weakness in the right arm when this tender point was tapped. Treatment must aim above all to depress the morbid irritability of the cortex. Repose is the main thing; with more than two seizures a week, patients taking a course of treatment should be kept in bed or on a reclining chair out-of-doors. He warns that an epileptic should never sleep with a feather pillow but always with a hair pillow, as with this he will not smother to death if he happens to roll on his face during a seizure in the night. Vitiated air alone may bring on seizures. If there is the slightest suspicion that the patient has had encephalitis or meningitis, Erlenmeyer applies a seton in the back of the neck and keeps it active for months. He states that he has obtained with this, especially in the young, brilliant results. He approves of chloral and cocain as adjuvants to bromid treatment, reducing at the same time the proportion of salt in the food. The most frequent causes of epilepsy are encephalitis and meningitis, whether during intra-uterine existence or early infancy or the result of inherited syphilis or not, and the different products and relics of these affections are liable to yield to treatment with iodids. Iodin salts internally, brine baths and a seton in the back of the neck are his main reliance. It is fortunate that children in particular bear the iodids so well. This treatment must be kept up for months and possibly repeated after a pause devoted to tonics. He always gives sodium and potassium iodid together, always in an alkaline solution and beginning with small doses, progressively increasing, with a diet avoiding acids. In prevention of the single seizure with protracted aura, lively friction and faradic electricity may avert the attack. Von Strümpell applies a ring of irritant plaster around the limb. With Jacksonian attacks beginning at the outer end and working upward, a constricting band at the root of the limb may arrest the attack. With a general aura, inhalation of amyl nitrite may be useful as also the swallowing of salt.

85. **Camphor in Experimental Infection.** — This is the research referred to by Leo as mentioned in abstract 98, p. 1672, of THE JOURNAL, May 24, 1913.

87. **Hemorrhage in the Gastro-Intestinal Tract.**—Stadelmann describes a number of unusual cases, including one in which a robust, previously healthy young man succumbed suddenly to hemorrhage from a varix in the stomach and absolutely no cause could be discovered for the varicose enlargement or for its rupture.

Medizinische Klinik, Berlin

May 4, IX, No. 18, pp. 693-734

91 *Abortive Forms of Tabes and General Paralysis. P. Schuster.
92 Nature and Treatment of Dysmenorrhea. A. Balu. Commenced in No. 17.
93 The Diet in Severe Diabetes. L. Blum.
94 Spinal Cord Complications in Acute Articular Rheumatism. Kober.
95 Length of Latent Period in Wassermann Reaction. A. Dreyer.
96 *Respiration Exercises in Treatment of Relics of Pleurisy. (Aktive Pneumatotherapie der Residuen von Pleuritis.) Stemmler.
97 Salvarsan in Syphilis. I. Schönberger. Commenced in No. 17.
98 Technic for Examination of Blood. (Weitere Beiträge zur Methodik der Blutuntersuchung.) E. Münzer.

91. **Abortive Tabes.**—Schuster remarks that the greatest progress in the last decades has been in the line of diagnosis. We have learned to recognize a number of conditions as the *premonitory* stage of certain familiar diseases. This has permitted the recognition of rudimentary or abortive forms of exophthalmic goiter, myxedema and many other affections. Analyzing his 500 cases of tabes, progressive paralysis or cerebrospinal syphilis during the last ten years, he found seventy-eight cases of the abortive type. *Only forty-six* of these had pronounced symptoms. In thirty-two there were merely reflex rigidity of the pupil and disturbance in the sensibility, usually in the legs. In none of these abortive cases was there any suggestion of lancinating pains. In a few there was isolated ataxia of the legs. He never encountered a case in which there were crises alone for years without other signs of certain tabes. In a recent case a woman of 30 had suffered for years from pains in the stomach and vomiting and a number of operations had been done on her, but the true source of the trouble was discovered by the rigid pupils, general hypalgesia and extinction of the Achilles reflex. His experience confirms that of others that the pupil disturbances may occur isolated, and for years may be the only sign of the affection. Next to the pupil disturbances come the disturbances in sensibility; sometimes the hypalgesia extends over the whole body. It is possible that the modification of the cerebrospinal fluid, resulting from the syphilis, may check the transmission of the sensations of pain. Another feature of the abortive type is the lack of characteristic subjective phenomena; the patients complain merely of headache, depression or restlessness, more like patients with merely functional derangement.

96. **Active Respiration Treatment to Ward Off Adhesions after Pleurisy.**—Stemmler expatiates on the advantages of respiratory exercises after recovery from pleurisy, thus increasing the ventilation through the lungs and the vital capacity while warding off development of adhesions. Simple deep breathing is useful but various *forms* of respiratory exercises *in the pneumatic* cabinet are far *more effectual*. He describes a number of them as he has perfected the technic.

Monatsschrift für Kinderheilkunde, Berlin

May, XII, No. 1, pp. 1-58

99 *Influence of Psychic Factors on Infants' Nutrition. (Einfluss psychischer Vorgänge *auf den Ernährungserfolg* bei Säuglingen.) W. Birk.
100 Research on Etiology of Scarlet Fever Negative to Date. (Aetiologie des Scharlachs.) M. Kretschmer.
102 *The Muscular Work Done by an Infant. (Die Arbeitsleistung des Säuglings.) A. Schlossmann.
103 Infant-Feeding. (Ueber *Säuglingsernährung.*) E. Schloss and *L. Langstein.*

99. **Psychic Influence in Nutritional Disturbances of Infants.**—Birk maintains that the *condition* known as "hospitalism" is sometimes brought about by purely psychic causes. In addition to hygienic care and sufficient food, the infant needs a certain inner satisfaction that comes from harmony with his surroundings and affection and understanding on the part of those charged with his care. Merely being cared for individually by a single nurse or in a private family does not always suffice if sympathy is lacking. He describes two cases where all external factors, such as unsuitable food, *lack* of care or infection could be excluded. He gives a curve showing the variation in weight and general health of the *first infant* under happy and unhappy surroundings. The second *one* was the *illegitimate* child of an extremely nervous and sensitive mother *and probably* inherited a psychopathic disposition. It developed *profound* anorexia and died on its second birthday. Neither clinical examination nor autopsy revealed any organic *disease.*

102. **Muscular Work Done by the Infant.**—Schlossmann registered the amount of muscular work performed by infants in the course of a day. Tables are given showing the results, which demonstrate that in proportion to the weight of its muscles, the infant does about as much muscular work as an active adult. The dietary requirement of the infant varies according to its temperament and activity, just as it varies in the adult, depending on whether he is at rest or engaged in active labor.

Münchener medizinische Wochenschrift

May 6, LX, No. 18, pp. 961-1016

104 **Thyroid Origin of Hemorrhagic Uterine Disease.* E. Sehrt.
105 Therapeutic Action of Various Dyes *in Diplobacillus* Infection of the Eyes. (Experimentelle und klinische Versuche über Chemotherapie bei der Diplobazilleninfektion des menschlichen Auges.) H. Gebb.
106 **Influence of Digitalis* on Recuperation of the Heart after Muscular Exercise. (Einfluss der Digitalis auf die Erholung des Herzens nach Muskelarbeit.) *E. Bernoulli.*
107 Advantages of Intravesical Technic for *Operations on the* Bladder. L. Kielleuthner.
108 *Treatment of Hemophilic Hemorrhage by Thermocauterization. H. Hahn.
109 Severest Form of *Melena Neonatorum Cured by* Intramuscular Injection of Defibrinated Human Blood. A. Merckens.
110 *Improved Technic for Preservation of Anatomic Specimens. L. Jores.
111 Tattooing and Erysipelas. E. Sehrwald.
112 **Diagnosis* and Treatment of Chronic Pyloric Ulcer. Faulhaber. *Commenced in No. 17.*

104. **Thyroid Origin of Hemorrhagic Uterine Disease.**—Sehrt reviews recent research which demonstrates anew the close relations between the thyroid *and the genital organs.* Excessive or *insufficient functioning* of the thyroid causes changes in the blood, a relative reduction in the neutrophil leukocytes and a relative or absolute lymphocytosis. But with excessive thyroid functioning the coagulability of the *blood* is much reduced while with insufficient functioning the coagulating time is much hastened. This effect of abnormal conditions in the thyroid on the coagulating power of the blood throws light on certain cases of hemorrhagic uterine disturbances, suggesting that they are abortive forms of myxedema. In twenty pure cases of hemorrhagic uterine disturbances *he found in thirteen of the patients pronounced signs of thyroid hypofunctioning and in all but one the* coagulating time was *from eight to four minutes in contrast to the nine or ten minutes with normal blood. The viscosity* was frequently below normal, in a *number only half of the* normal figure. These findings parallel remarkably *those* Kocher obtained in 155 cases of subnormal thyroid functioning (myxedema, cachexia strumipriva). Sehrt cites further arguments to sustain the view that thyroid insufficiency is a prominent factor in pregnancy tetany and possibly also in eclampsia. It is possible that all these conditions are different stages of the same *disturbance* in thyroid functioning. In any event, the *condition of the thyroid should* be ascertained in all cases of *eclampsia and this* is easily done by examination of the blood, abnormally rapid coagulation testifying to a lack of the normal thyroid secretion. One of his cases was peculiarly instructive; a young woman with the hemorrhagic metropathy had borne twins three years before and had had severe eclampsia at that time. At present the *coagulation time* is reduced to 5 minutes and with a relative neutrophil leukopeny of 45 per cent., there is lymphocytosis of 48 per cent. in *contrast* to the normal 20 to 25 per cent. It is possible also, he remarks, that the thyroid may be involved in the tendency to habitual *abortion.* Cases have been reported in which women with goiter who had been *married for* several years without conceiving bore children after thyroid treatment. Cretin mothers are liable to habitual abortion for a time but finally bear living children. The habitual abortions of women with infantile uterus suggest that the thyroid likewise may be in an infantile condition. It seems to be established now beyond question that syphilis is not responsible for all cases of habitual abortion. Sehrt's research indicates that thyroid *treatment* may have a wider sphere of action than has *hitherto* been *deemed* possible.

106. **No Influence from Digitalis on the Work of the Muscles.**—Bernouilli reports painstaking research which fails *to* show any difference in the recuperation of the heart after graduated *muscular* work before and after exhibition of digitalis.

108. **The Actual Cautery in Hemophilic Hemorrhage.**—Hahn reports two cases in which as a last resort the bleeding gum was cauterized with the thermocautery. This seems paradoxic treatment as the cautery must open new vessels. The prompt success in both cases shows that under the influence of the heat the contents of the vessels must have coagulated and the production of thrombi from the changes in the vessel must have aided in preventing further escape of blood. It is possible also that the necrosis of the tissues liberated substances which promoted local coagulation. In one of his cases the child had injured its mouth in a fall and the bleeding had kept up for seven days, uninfluenced by injection of antitoxin, horse serum and gelatin. To prevent the child from working off the scab after the cauterization a bandage was tied around to protect the upper lip and gum; also 15 c.c. of fresh human blood was injected in the nates. There was no further hemorrhage in either case after the cauterization.

110. **Preservation of Anatomic Specimens.**—Jores has succeeded in retaining the natural color much more effectually, he states, than has been possible with other technics. He ascribes his success to the use of chloral, which induces the production of hemochromogen. The specimen is soaked at first in a mixture of 5 parts artificial Carlsbad salts, 5 parts formaldehyd, 5 parts of a concentrated aqueous solution of chloral hydrate and 100 parts water. Otherwise the technic is the usual one with six hours rinsing and preservation in a solution of potassium acetate 30 parts, glycerin 60 parts and water 100 parts.

112. **Chronic Pyloric Ulcer.**—Faulhaber reiterates that chronic ulcer of the pylorus is characterized by a well defined syndrome: Besides the usual symptoms of gastric ulcer, cardialgia, manifest or invisible bleeding, vomiting, etc., the symptoms pointing to chronic pyloric ulcer are the periodicity of the disturbances, the constant excessive gastric secretion and the spasm of the pylorus. This symptom of pylorospasm is not observed with ulcers at a distance from the pylorus; only when they are in or near the latter. The pylorospasm can readily be recognized by Roentgen examination even when the motor function of the stomach is but slightly impaired. In eight of his thirty-two cases operative treatment was applied and there have been no disturbances since, but he does not venture to call these patients permanently cured as recurrence is still possible. Of the fifteen patients treated by internal measures alone only three are free from disturbances at present. This enables judgment of the efficacy of medical measures without waiting longer, proving that medical measures fail in from two-thirds to three-fourths of all cases of chronic pyloric ulcer.

Wiener klinische Wochenschrift, Vienna

May 1, XXVI, No. 18, pp. 693-736

113 *Treatment of Exophthalmic Goiter by Roentgenotherapy of the Ovaries. (Ueber Versuche, die Basedowsche Krankheit mittels Röntgenbestrahlung der Ovarien zu beeinflussen.) J. Mannaberg.
114 Reliability of Serodiagnosis of Pregnancy. (Erfahrungen mit der biologischen Diagnose der Schwangerschaft nach Abderhalden.) R. Ekler.
115 Technic for the Meiostagmin Reaction. (Ueber Antigene für die Meiostagminreaktion.) G. Izar.
116 From the Seat of War. (Kriegschirurgische Eindrücke und Beobachtungen aus Belgrad während des Balkankrieges.) E. L. Fieber.
117 Cyclic Oculomotor Paralysis. H. Lauber.
118 *Arsenic Poisoning from Wall Paint. (Zur Kasuistik der Arsenikvergiftung.) E. Lindström.
119 Trained Nurses in Austria. (Die Fürsorgeschwester im Frieden und im Kriege.) L. Moll.

113. **Treatment of Exophthalmic Goiter by Roentgen Exposures of the Ovaries.**—Mannaberg is convinced that the ovaries play some part in the clinical picture of exophthalmic goiter. This may be from some substance formed in the ovaries which acts on the thyroid and modifies its functioning in such a way that the exophthalmic goiter is the result. By the exposures to the Roentgen rays the source of this substance in the ovaries is dried up and the thyroid is permitted to resume its normal functioning. In the ten cases in which he has applied this measure a favorable influence was manifest on all the symptoms except the goiter. He does not call it a cure in any case as the pulse is still unstable. It is possible that a course of thyroid treatment might advantageously supplement the radiotherapy. In eight of the ten cases, the patients gained from 2.3 to 21 per cent. in weight. In one case the exophthalmos completely subsided; in half of the cases more or less improvement in this was evident, and in the others there was no change. The most striking improvement was subjective; nearly all the patients now feel entirely well and have regained their full earning capacity. They were women from 21 to 42 years old, and from three to fifteen exposures were given. His impression on the whole is that this method of treatment is more reliable than any other to date in the not too far advanced cases, and leads to improvement more rapidly.

118. **Arsenic Poisoning.** — Lindström occupied with his eleven-year-old son two newly painted rooms in a Swedish hospital, where he was assistant physician. He developed intense "neuralgia" persisting for many months and arsenic was found in the oil paint on the walls, in considerable amounts, 2.8 mg. in 200 c.c. Arsenic was found in his urine for several months after removal of the paint from the walls. The rest of the family had arsenic in the urine also but not in such large amounts as the other rooms had received only two coats of the paint, while in the room occupied by Lindström four coats had been applied. It was found that the arsenic had worked from the deeper layers to the surface, and scraps of wood from the doors also responded to tests for arsenic. He occupied the room for four months and then left for a vacation trip. On the journey the first neuralgic pains developed in the right axillary and sacral nerves, and distressed him during movements but subsided when he lay still. This "neuralgia" lasted a month and then subsided during the summer—the season of open windows—but the next winter it returned in the arm and shoulder, with intense severity, until he could not use his right hand. The pain at last became like that of a phlegmon and involved the back, and his boy developed rebellious conjunctivitis and grew pale and thin. Then for the first time arsenic poisoning was suspected and examination of the urine revealed the arsenic. The pain in his arm for five months was so severe that he even thought of amputation but there was no actual paralysis.

Zeitschrift für Kinderheilkunde, Berlin

VII, Nos. 1-2, pp. 1-160. Last Indexed May 31, p. 1753

120 *Bronchotetany: Dyspnea from Spasm of Bronchial Musculature. (Ueber "Bronchotetanie," ein noch nicht beschriebenes Krankheitsbild der Spasmophilia.) R. Lederer.
121 Atropin, Pilocarpin or Epinephrin Tests for the Autonomic Nervous System in Children. (Die pharmakologische Prüfung des vegetativen Nervensystems im Kindesalter.) Eckert.
122 Classification of Alimentary Disturbances in Infants. (Zur Einteilung der Ernährungsstörungen des Säuglings.) H. Finkelstein.
123 *Constitutional Inferiority of Organs in Certain Breast-Fed Infants. (Ernährungsstörungen der Brustkinder und Konstitution.) J. K. Friedjung.
124 The Intestines in Fulminating Cerebrospinal Meningitis. (Der Darm bei fondroyant verlaufender Genickstarre. Zur Erklärung der parenteral bedingten Durchfälle.) F. Göppert.
125 *Enlargement of Cubital Lymph-Nodes. (Klinische Bedeutung der Cubitaldrüsenschwellungen.) Götzky.
126 *Toxin in the Blood in Diphtheria. (Toxinbefunde im Blute diphtheriekranker Kinder.) Harriehausen and J. Werth.
127 *Action of Tuberculin Introduced Directly into the Lymphatic System. (Wirkung des auf den Lymphwegen den Drüsen zugeführten Tuberkulins.) H. Koeppe.

120. **Dyspnea from Spasmodic Contraction of the Musculature of the Bronchi**—In an article in the *Wiener klin. Wchnschr.* (abstracted in The Journal April 12, 1913, p. 1196), Lederer described a condition of spasm of the bronchial muscles causing dyspnea and finally death. In the present article he gives detailed histories and the necropsy findings in six cases terminating fatally, one in twelve hours and another only after two and a half months. Four of the children were rachitic, the others showed no signs of rachitis. The condition has not been described before as a distinct clinical

picture. It is in fact only the constitutional spasmophilic diathesis manifesting itself in the smooth bronchial musculature instead of in the striated muscle of the extremities as it more commonly does. Lederer gives it the name of bronchotetany, rather than bronchospasm, to distinguish it from asthma in which there are also bronchial spasms, but it is an entirely different condition. Asthma yields promptly to epinephrin, which only increases the spasm in bronchotetany. There is no atelectasia in asthma. The diagnosis of spasmophilia may be confirmed by the hypersensitiveness of the muscles to the electric current. Attention is called to the involvement of the bronchial muscles by the appearance of the child. There is marked dyspnea (respirations as high as 120 per minute), involvement of the accessory muscles of respiration, dilated nostrils. The physical signs may indicate pneumonia but roentgenoscopy shows atelectasia instead of the typical picture of consolidation. Necropsy shows a compensating emphysema in the part of the lung that is not atelectatic. Treatment is not very hopeful. In the cases of long duration small or frequent feedings of breast milk or gruel should be given, with cod liver oil. In the severe acute cases only symptomatic measures can be applied, chloral for the spasms, camphor and caffein for the heart and oxygen inhalation for the dyspnea.

123. **Heredity as the Cause of Nutritional Disturbances in Infancy.**—In 1907 Adler published the results of his research on organic defects. They indicate that children may inherit more or less defective organs and that these inherited defects manifest themselves later in life in various ways. Friedjung decided to test this theory in regard to the diseases of the digestive tract encountered in his clinic. He selected seventy-six apparently healthy new-born infants, with no history or evidence of tuberculosis or syphilis. They were all breast-fed; he excluded from his research older infants and those fed artificially, in order to avoid the possibility of external causes of disease. His results confirmed Adler's hypothesis. The majority of the children who developed normally had parents who showed no defects in the digestive tract. A majority of those who, in spite of the greatest care, developed some digestive disturbance, had parents with digestive tracts below par. The history of the parents and grandparents was studied, and tables are given showing his findings in detail.

125. **Swollen Lymph-Nodes at the Elbow.**—Götzky examined 647 children for enlarged cubital glands and found them in 113; in eighty-six on both sides, in twenty-seven only on one side. He concludes that almost all cases of bilateral enlargement are syphilitic but only a few cases of enlargement on one side. It is often impossible to determine the cause of the one-sided enlargement. The lymphatic diathesis has nothing to do with it. Rachitis has very little effect on the cubital glands; tuberculosis somewhat more. Roentgenoscopy is a valuable aid in diagnosing syphilitic bone changes.

126. **Demonstration of Toxin in the Blood of Diphtheria Patients.**—By the use of Römer's method of intracutaneous injection of the serum of diphtheritic children into guinea-pigs, Harrichausen and Wirth were able to demonstrate the presence of toxin in the blood. Necrotic areas developed at the site of the injection, while no reaction followed the injection of normal serums. Serum from cases of varicella and cerebrospinal meningitis also caused necrosis, but here the addition of diphtheria antitoxin had no effect, while in the diphtheritic cases the addition of antitoxin before injection prevented necrosis. Beyer concluded from his experiments that since both toxin and antitoxin could be demonstrated in the blood in some cases, only small doses of antitoxin should be given. Harrichausen and Wirth, on the contrary, conclude that so long as there is free toxin circulating in the blood, larger doses of antitoxin can be given with good results, and that, as new toxin is being constantly produced, large initial doses of antitoxin are to be recommended.

127. **The Skin Tuberculin Test Technic as a Therapeutic Measure for Tuberculous Lymph-Nodes.**—Koeppe noticed in giving von Pirquet's test that the enlarged axillary glands on the side of the test frequently decreased in size, while those on the other side were unmodified. He concluded that the tuberculin, entering the lymph-spaces, was carried to the lymph-nodes, where it exerted a direct curative effect. He describes a striking case which confirmed this view. A child of 4½ years was brought to the hospital in an emaciated cachectic state. Chest flat, breathing shallow but no physical signs in the lungs; in the right axilla swollen lymph-nodes, as large as the fist; the lymph-nodes along the sternomastoid also swollen. The lymph-nodes were hard, with no trace of fluctuation. The Pirquet test was strongly positive. Four days later there was a pustule at the site of the test inoculation, surrounded by small vessels. Unexpectedly the child began to improve, and the axillary lymph-nodes to decrease in size. Another Pirquet was given with continued improvement, but the neck glands did not decrease, and then Pirquet was given just back of the ear, as the lymph passages of this region communicate directly with the neck lymph-nodes. Decrease in the size of these nodes immediately followed. The general health and the local condition continued to improve and at present—four years later—the child is well. Other cases have been treated in the same way since, with good results, and Koeppe recommends it as a therapeutic measure in all cases where the lymph-nodes are swollen and hard and the Pirquet reaction is strongly positive.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 4, XXXIV, No. 53, pp. 551-566

128 Local Action of De Giaxa's Tuberculin. (Intorno all'azione locale delle sostanze estratte dal bacillo della tubercolosi.) A. Romano.

May 6, No. 54, pp. 567-574

129 Transplantation of Kidneys. (Esperienze sul trapianto del reni.) C. Mantelli.

Riforma Medica, Naples

May 3, XXIX, No. 18, pp. 477-504

130 Mikulicz' Disease in Connection with Leukemia and Pseudoleukemia. A. Ceconi.

131 Foreign Bodies in Esophagus and Air Passages. (Contributo alla casistica dei corpi estranei dell'esofago e delle vie aeree.) E. Lazzari.

Norsk Magazin for Lægevidenskaben, Christiania

May, LXXIV, No. 5, pp. 593-736

132 *Safe Limit of Loss of Blood at Childbirth. (Store blødninger ved fødsel. Hvor stort blodtap taaler et menneske?) G. Gjestland.

133 The Campaign against Tuberculosis in Christiania. (Tuberkulosearbeidet i Kristiania.) Y. Ustvedt.

134 First Death after Salvarsan Injection in Norway. (Død efter salvarsaninjektion.) K. Grøn.

135 Dislocation of the Foot. (Luxatio pedis sub talo.) N. Paus.

136 Solitary Cysts in Long Bone. (Bencyster, ostitis fibrosa og multiple exostoser.) N. Paus.

137 Glycosuria and Internal Secretions. (Om glykosurien med særlig hensyn til den interne sekretion.) V. Fürst.

132. **How Much Blood Can a Person Lose without Succumbing?**—Gjestland discusses the frequency of fatal hemorrhage at childbirth, stating that there were five cases among the 20,628 women delivered in the last ten years at the Christiania maternity. In four of the five fatal cases there was placenta praevia. The mortality from excessive hemorrhage was thus 0.024 per cent. He cites five other clinics with a mortality from this cause ranging from 0.036 to 0.12 per cent. of from 11,000 to 38,923 obstetric cases. At Christiania there were in addition eighty-one cases in which 2,000 gm. of blood or more was lost but the women recovered. In some the amount was 2,500 gm. and in two instances 3,000. This figure—3 liters—seems the extreme limit, but the two women were discharged the fifteenth and twenty-seventh day in good condition; in one the hemoglobin percentage on dismissal was 80 and the reds had climbed to 4,460,000. The experiences at the maternity have shown that dangerous hemorrhage from atony of the uterus is so rare as to be negligible. The hemorrhage is generally due to retained clots or other material. Gjestland accepts 1/13 of the body weight as the average amount of blood in the body. The women who lost from 2,000 to 3,000 gm. of blood must thus have been drained of about half their entire blood supply. (Discussed also in editorial in this issue.)

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THE TREATMENT OF NARCOTIC ADDICTION

ALEXANDER LAMBERT, M.D.
Professor of Clinical Medicine in Cornell University Medical College; Visiting Physician to Bellevue Hospital
NEW YORK

My article of four years ago[1] in THE JOURNAL describing a treatment for alcohol, morphin and other drug habits has caused a persistent demand on THE JOURNAL and on me for information concerning this subject. Since that time I have had a broad experience in the use of this treatment and a much wider experience with patients addicted to various drug habits. To serve a useful purpose, and at the request of THE JOURNAL, I shall explain further what seems essential in the use of this treatment, what seems non-essential, and in what varying way the treatment may be modified to meet the individual differences found in the patients.

A further experience with the patients has brought out the striking fact that nearly 80 per cent. of those addicted to the use of morphin and opium have acquired their habit through legitimate prescribing by their physicians or by self-medication. This has been due to a lack of realization on the part of physicians that it is by small doses, often repeated over a certain length of time, and not by any definite amount taken for the purpose of acquiring the habit as a luxury or as a vicious self-indulgence, that patients drift into the morphin habit. The patients themselves have failed to realize that if they took morphin even in small doses over a certain length of time, the habit would be fastened on them before they knew it. As the majority of patients have drifted into this habit unwittingly through means furnished by the medical profession, it seems justifiable that we should do all possible to popularize among the profession a method of treatment which with a minimum of suffering can relieve these patients of their unfortunate habit. In the majority of cases when once the morphin habit is acquired, the drug ceases to give pleasure. Often the pain for which it was taken has long ceased to exist; it is continued because of the intensity of the suffering when it is withdrawn. In spite of all statements and beliefs to the contrary, patients cannot break away from this drug of their own volition unless some treatment is at hand to relieve the intensity of the withdrawal symptoms, because of the intense suffering which these symptoms bring.

Several physicians in various parts of the United States are to-day using this treatment with success. Others report that they have failed in it, and from the many questions asked it is evident that often the failures have been due to the fact that physicians, reading the details of the treatment, have concluded that they could modify it at will and could succeed, no matter how much of the plan as published was altered or even omitted. When any treatment is a failure with the morphin patient it means intense suffering for that patient, and he should not be condemned if, in the intensity of his unrelieved suffering, he is able to obtain by some method a soothing drug which will relieve his agony. Great nicety of judgment has to be used in deciding between how much the patient is really suffering and how desirous he is of obtaining some alleviation of the fear that he may suffer. The real suffering should and can always be relieved, and the fear of what may come can always be alleviated.

This treatment is one of many details which have to be mastered before it can be successfully carried out. It is a mistaken kindness to alleviate the dread a patient has of taking the treatment by promising that he shall take it in his own home. The alcoholic will do as he chooses, not as the physician desires he shall do, if he is in his own home. The morphinist has hidden in various places supplies of morphin which he can obtain in spite of the strictest vigilance. If these patients are taken to a hospital the treatment can be given by those accustomed to administer it, where the medical attention can be more constant, where the patients will unconsciously exert more self-control than in their own environment, and where the supply of the narcotic can be controlled. The essentials of the treatment, which cannot be altered, are the persistent administration of the belladonna mixture in small doses and the thorough elimination by means of some form of mercury as a cathartic. This practically means some form of blue mass or calomel, either given in some form of compound cathartic pill or alone. Some patients who cannot take calomel without being salivated can take blue mass. The cholagogue action is essential. The mere clearing out of the intestinal tract is not sufficient in the process of elimination. Enemas given to clear out the colon do not produce the same results as cathartics. There must be the cholagogue action from above. Often calomel in divided doses can be advantageously substituted for the compound cathartic pills, especially if the patients are nauseated. Often if the stools about the fortieth hour become clay-colored, some form of ox-gall preparations is useful.

To save reference to the first article the constituents and amounts of the mixture are repeated here:

		Gm. or c.c.	
℞	Tincturae belladonnae.....	62	℥ij
	Fluidextracti xanthoxyli..		
	Fluidextracti hyoscyami.āā	31	℥j

In making the mixture of belladonna, hyoscyamus and xanthoxylum, a 15 per cent. tincture of the belladonna must be used or an equivalent amount administered if a weaker tincture of belladonna is used. If this is not done the craving for the drug often remains as a nagging longing, and the obliteration of the craving is incomplete. It is also my personal experience that unless the mixture is pushed to the beginning physiologic tolerance of the belladonna, as shown by dry throat, dilated pupils or even a flushing and a rash, or the beginning incisive voice of the commencing belladonna hallucinations, though the last-named is to be avoided if possible, the desired results are not obtained. The converse is true that the desired results are obtained even if only one, two or three drops of this belladonna mixture can be tolerated by the patient every hour. It is further essential that this belladonna mixture should be given persistently in small doses and not by the teaspoonful three times a day, as has been frequently reported to me.

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[1] Lambert, Alexander: The Obliteration of the Craving for Narcotics, THE JOURNAL A. M. A., Sept. 25, 1909, p. 985.

It is absolutely essential that the morphin patient before starting in the treatment should have a thorough cathartic action before the belladonna treatment is begun. At this time an enema is not sufficient, and unless such cathartic action has been obtained patients are very sure later to be troubled with persistent vomiting. Further, though not essential, it is wiser to give three-fourths of the total twenty-four-hour dose instead of two-thirds as the initial dose of morphin. The patients thus go through their first two periods without any distress, and they do not begin to have the symptoms of discomfort until the third dose of morphin begins to wear off. If but little morphin is given in the beginning dose, and one halves it at the second dose and halves it again at the third dose, owing to the insufficiency in the beginning the patient is not really comfortable at any time, and has a nagging desire for more.

Patients will often try to hide how much they are really taking. Any patient taking over 30 grains of morphin seems to be able to tolerate almost any amount. To one patient taking over 60 grains a day by hypodermic I gave 45 grains hypodermically as the initial dose, to begin the treatment, and he was only comfortably drowsy from it. In the case of another patient who declared he was taking only 6 grains a day I found that in order to make him comfortable I was forced to give him 47 grains hypodermically in two hours. This patient was not even drowsy, but then began his treatment and went through with success. The method in detail is as follows:

AUTHOR'S METHOD OF TREATMENT

A patient addicted to morphin is given five compound cathartic pills and 5 grains of blue mass, and six hours later, if these have not acted, they are followed by a saline; after three or four abundant movements of the bowels from these cathartics the patient is given, in his habitual way, by mouth or by hypodermic, in three divided doses at half-hour intervals, two-thirds or three-fourths of the total daily twenty-four-hour dose of morphin or opium to which he has been accustomed. The physician should observe carefully after the second dose has been given, as the amount then equals either four-ninths or one-half the total twenty-four-hour dose. A few patients cannot comfortably take more than this amount. Six drops of the belladonna mixture are given in capsules at the same time as the morphin. This belladonna mixture in doses of 6 drops (and by drops I do not mean minims: I mean drops dropped from an ordinary medicine-dropper, which is about half a minim dose) is given every hour for six hours. At the end of six hours the dosage is increased 2 drops. The belladonna mixture is continued every hour of the day and every hour of the night continuously throughout the treatment, increasing 2 drops every six hours until 16 drops are taken, when it is continued at this dosage; it is diminished or discontinued at any time if the patient shows belladonna symptoms such as dilated pupils, dry throat or redness of the skin, or the peculiar and incisive and insistent voice, and insistence on one or two ideas. It is begun again at reduced dosage after these symptoms have subsided. If the patient has an unusual sensitiveness to belladonna it will usually show itself in the first six or eight hours and the hourly dosage can be cut down to from 2 to 4 drops and raised by one drop every six hours. If, on the other hand, even 16 drops persisted in for twelve consecutive hours do not give dryness of the throat the dosage should be raised to 18 or 20 every hour until the dryness occurs and then the amount reduced.

At the tenth hour after the initial dose of morphin is given the patient is again given five compound cathartic pills and 5 grains of blue mass. These should act in six or eight hours after they have been taken. If they do not act at this time, some vigorous saline is given, and when they have acted thoroughly the second dose of morphin is given, which is usually about the eighteenth hour. This should be one-half the original dose, that is, one-third or three-eighths of the original twenty-four-hour daily dose. The belladonna mixture is still continued, and ten hours after the second dose of morphin has been given, that is, about the twenty-eighth hour, five compound cathartic pills are again given and 5 grains of blue mass, these again, if necessary, followed by a saline seven or eight hours later. After these have thoroughly acted at about the thirty-sixth hour, the third dose of morphin is given, which is one-sixth or three-sixteenths of the original dose. This is usually the last dose of morphin that is necessary. Again, ten hours after the third dose of morphin, that is, the forty-sixth hour, the five compound cathartic pills and 5 grains of blue mass are again given, followed seven or eight hours afterward by a saline, and one expects at this time to see the bilious green stool appear. When this appears, after the bowels have moved thoroughly, about eighteen hours after the third dose of morphin, about the fifty-sixth hour of treatment, 2 ounces of castor oil are given to clear out thoroughly the intestinal tract. Sometimes it is necessary to continue the belladonna mixture over one or two more cathartic periods before giving the oil. During this last period when the bowels are moving from the compound cathartic pills and before the oil is given, the patients have their most uncomfortable time. Their nervousness and discomfort can be controlled usually by codein, which can be given hypodermically in 5-grain doses and repeated if necessary; or some form of the valerianates may help them. About the thirtieth hour of treatment these patients should be stimulated with strychnin or digitalis, or both, every four to six hours.

Some patients cannot tolerate codein and break out into an urticarial rash or a fine red punctate rash or swelling and burning of the skin. In these patients relief can be obtained by dionin, which seems about twice as strong as codein in its power to relieve nervousness and the feeling of distress. It should be given, therefore, in doses of about 2 or 3 grains or less. Codein or dionin should be cut off as soon as possible after the castor oil has acted. It may be given during the next succeeding twenty-four hours if necessary, but if patients are for any reason taking codein for forty-eight hours after they are through their treatment, they will usually persist in doing so and must be broken from this narcotic or they will from this return quickly to their morphin or heroin.

The withdrawal pains or pain in the joints and aching in the bones and muscles can sometimes be relieved by hypodermics of some form of ergot and strychnin, sometimes by massage, sometimes by sodium salicylate, sometimes by a salicylic compound combined with some of the coal-tar products such as antipyrin, phenacetin or pyramidon; they can always be eased up by codein or dionin. The addition of codein to these coal-tar products increases their analgesic effect. These patients have been in the habit of referring all their discomfort and distress to the lack of morphin and have consequently drifted into the habit of referring everything to the lack of it. For two or three days after they are off their drug any indiscretion in eating, or any attempt at too much physical exertion, will bring a recurrence of their withdrawal symptoms. This is simply due to exhaustion or to indigestion, and if treated as such quickly disappears without any narcotic. Insomnia is often a troublesome symptom after the patients are off their drug. This may have to be treated in some patients with doses of bromids, in others by chloral or by other various hypnotics. Veronal has, in my hands, given so much depression and produced so many bad after-effects that it should be avoided. The best hypnotic is muscular fatigue, and these patients should begin to exercise regularly and be built up physically as soon as their condition permits. Usually this is within a week after they are off their drug.

Patients who have been taking both morphin and alcohol should be treated for the morphin and can be tapered off at the same time from their alcohol. They are apt to have an active gastritis, which complicates their ability to retain their medication or to retain food. Sodium citrat in doses of from 5 to 10 grains every hour best relieves this condition, with or without from 10 to 20 grains of cerium oxalate or 5 grains of Tully's powder every two hours for one or two doses.

Cocain and morphin are not infrequently found as a simultaneous indulgence. This is the most difficult combination to treat. Formerly, in my early experience, I considered it not difficult, but later experience has made me realize that cocainism adds to the difficulty of treating a morphin patient. Usually as the effect of the morphin wears off these patients become delirious, unreasonable, unmanageable and exceedingly ugly. They do not know or realize what they are saying or doing and they make trying patients. Often on the morning following their delirium they will have no recollection of what they have said or done or of any of the suffering which they asserted they were enduring, and will declare that they had a very good night.

In treating an alcoholic the belladonna mixture and the five compound cathartic pills and 5 grains of blue mass are given simultaneously at the first dose. The belladonna mixture is continued every hour of the day and every hour of the night the same as with the morphin patients, and twelve hours after the initial dose patients are again given from three to five compound cathartic pills, and at the twenty-fourth hour after the initial dose they are again given the cathartics followed by salines if necessary, and again at the thirty-sixth hour. After these last cathartics, the bilious stools will appear, and by the forty-fourth or forty-fifth hour the castor oil is given. Sometimes it is necessary to carry on the treatment over another period, and the compound cathartic pills and blue mass are again given at the forty-eighth hour, which would bring the end of the treatment about the sixtieth hour. It may even be necessary to carry on the treatment one or two periods longer.

Elderly or very nervous patients who have been on a prolonged debauch are tapered off with 2 ounces of whisky for four or five doses through the first twenty-four hours. If these patients are excessively nervous it is necessary also to see that they sleep, and the mixture of chloral hydrate, 20 grains, morphin 1/8 grain, tincture of hyoscyamus, 1/2 dram, tincture of ginger, 10 minims, tincture of capsicum, 5 minims, and water, 1/2 ounce, which was recommended before, is the best hypnotic for them. These patients should also have cardiac stimulants such as strychnin and digitalis after the first twenty-four hours, or sooner if they are weak.

The cocainist can be treated like the alcoholic, except that no cocain is given at any time, and strychnin or some such stimulant must be given from the beginning of the treatment.

To break a man from his tobacco habit alone he should be allowed to taper off the first twenty-four hours or he can be cut off abruptly and should be treated like the alcoholic.

RESULTS

I am often asked as to the success of this treatment and the percentage of patients who remain free from their addiction. This varies enormously with the individual patients and one can only judge from one's experience. My personal experience is that 11 per cent. of the morphinists and 12 per cent. of the alcoholics return for treatment. Doubling this percentage it still gives us 75 per cent. as remaining free from addiction. Of these a very high percentage are known to have stayed free.

SCOPE OF THE TREATMENT

This treatment is not offered as a cure of morphinism or as a cure of delirium tremens or chronic alcoholism, as I said in the first article. It will, however, obliterate the terrible craving that these patients suffer when, unaided, they endeavor to get off their drugs or are made to go through the slow withdrawal without some medication to ease them. Compared with the old methods of either slow withdrawal or rapid withdrawal, it is infinitely superior. Deprivation of a drug is in no way equivalent to elimination of that drug from the body. Deprivation causes suffering; elimination relieves it. But neither this combination of drugs nor any other combination known to man can prevent persons, after they are free from their addiction—be it alcohol or morphin,—from going out and repoisoning themselves by taking again the drug which has poisoned them and led them on to their habitual intoxication.

Again, as said in the first article, so long as a man lives and just so sure as that man lives, he can never again take a dose of alcohol for any reason whatsoever or in any form whatsoever without the danger of going again to excess. After the patients have been freed from their drug and from the desire for it, they are by no means cured of their former habits of life and environment, and, more especially, of their former habits of thought. Many of these patients are psychasthenics, and the problem of their regeneration is one of psychology to be reached only by psychanalysis and patient rebuilding of their distorted views of life. The quickest method to bring them back to health is to send these patients to some physical trainer in order that their bodies may be put in as perfect condition as their years and the state of their viscera permit. To mollycoddle them and treat them as neurasthenic invalids means simply to increase the liability of their relapse; but to build them up bodily will do more to build them up mentally for the first three to six weeks than any other method of procedure. If, at the same time, it is possible to treat them psychologically, one will often be well toward the solution of the problem by the time that these patients have regained the full vigor of their physical health.

Many patients who come under the class of periodic inebriates and whose periodicity seems to occur with no known cause or reason are sufferers from chronic tobacco poisoning which, in reality, is the cause of their periodic alcohol inebriety. This is especially true of the excessive cigarette smokers and the many others who inhale their cigar or pipe smoke. These patients smoke to excess, and becoming nervous, increase their smoking that their nerves may be quieted. Finally they become so nervous through their tobacco that they must take some narcotic to quiet them and turn to alcohol. They are exceedingly intolerant to alcohol and after the first drink or so they are mentally not sober and then go on to the full spree. The vicious circle can be broken only by cutting off their tobacco, and unless the tobacco is cut off they will stop neither alcohol nor tobacco. They cannot stop their alcohol under these conditions, and their only chance is to stop the tobacco.

The alcoholic or morphinist is a man who is acutely or chronically poisoned by his drug, and through the poisoning of his intellect cannot be expected to reason or act in a normal way, although heretofore he has always been judged by the standard of normal human beings. Until we realize that we must unpoison him before we can expect his mind to act normally, we shall fail in the solution of the problems which confront us in dealing with alcoholics.

Each individual case has its own separate problems. This treatment is offered as the best means of unpoisoning the patient and putting him in a position where we can deal with him with a clear, unpoisoned mind. By treating these patients, then, as individuals, we can get at each one's own problems and keep him from self-destruction.

36 East Thirty-First Street.

ANIMAL EXPERIMENTS WITH VON RUCK'S NEW TUBERCULOPROTEINS

R. S. CUMMINGS, M.D.

LOS ANGELES

In The Journal, May 18, 1912, appeared a preliminary announcement by Karl von Ruck[1] of his discovery of a tuberculin with which he asserted that he could produce immunity to tuberculosis in both man and animals.

Later he issued a pamphlet in which was given briefly his method of making this vaccine and the protocols of his experiments by which he demonstrated immunity. Also in another article[2] von Ruck discussed the subject in a little more elaborate way than that taken in his pamphlet.

His tuberculin, or vaccine as he termed it, contained in each cubic centimeter 10 mg. of protein of tubercle bacilli and a small amount of fatty extractives. In children this was injected in doses of from 0.05 c.c. to 0.6 c.c., depending on the age and number of doses given. One or two doses were given, but when two were used neither was so large as the single one.

In all 339 children were treated, both tuberculous and non-tuberculous. Examinations were made over a period extending from three to eight months following vaccination. "Prompt and uniform development of all specific antibodies was demonstrated after a single dose." Physical signs which were present frequently disappeared and "there was not a single instance in which a comparison did not indicate unmistakable improvement."

In a comparatively short time after 0.01 mg. of virulent tubercle bacilli was placed in "immune serum," that is, serum obtained from an animal which had been treated with von Ruck's vaccine, lysis was produced. When these bacilli, after being treated with the "immune serum" until lysis had been produced, were injected intraperitoneally into guinea-pigs, death was not produced, although controls injected with tubercle bacilli which had been treated with normal serum died in from five to six weeks.

Guinea-pigs after being "immunized" were infected by injecting 0.01 mg. of virulent tubercle bacilli into the lumen of the trachea. These were killed at the end of eight weeks and showed only slight enlargement of the lymph-nodes, no tubercle bacilli being found. The single control injected in the same manner as the "immunized" pigs died in twenty-three days, the autopsy findings showing generalized miliary tuberculosis.

Knowing the failure of other investigators to produce immunity to tuberculosis by the use of the dead bacilli, we (the staff of the Barlow Sanatorium, at which I was formerly resident physician) concluded to test the vaccine to see if we could obtain complete active immunity as asserted by von Ruck. Accordingly the laboratory of the Barlow Sanatorium purchased 10 c.c. of the vaccine and the work here reported was done in the sanatorium with the help and suggestions of Dr. Walter V. Brem, who was especially interested in the necropsy findings.

One c.c. of the vaccine was thoroughly mixed with 2 c.c. of sterile normal saline containing 0.25 per cent. phenol (carbolic acid). Of this solution .3 c.c. (1 mg. of tuberculoprotein) were injected each week for ten successive weeks into each of ten apparently healthy guinea-pigs. Injections were made underneath the skin of the abdomen after the hair had been clipped and the area sterilized. The dates of injection were as follows: Aug. 22 and 29, Sept. 5, 12, 19 and 26, and Oct. 3, 10, 17 and 24, 1912.

Five weeks after the end of the course of vaccine treatment of these animals, they were inoculated intraperitoneally with from 0.001 mg. to 0.1 mg. of virulent tubercle bacilli, culture H-37, obtained from the Saranac Laboratory for the Study of Tuberculosis. At the same time nine controls were injected intraperitoneally with the same amounts of virulent tubercle bacilli as the vaccinated guinea-pigs.

Tables 1 and 2 show briefly the weights at the time of inoculation and at death, dosage, days of life and necropsy findings of both vaccinated and control guinea-pigs.

It was noted that about the fourteenth day after the inoculations the vaccinated animals began to appear sick and by the twenty-first day this was very obvious. They did not eat well, their hair became ruffled, much of their activity was lost and they had gnawed deep holes into *the boards* of their pens. By about the end of the fourth week the controls began to appear ill in quite the same way as the vaccinated ones.

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[1] Von Ruck, Karl: A Practical Method of Prophylactic Immunization against Tuberculosis, a Preliminary Announcement, The Journal A. M. A., May 18, 1912, p. 1504.

[2] Von Ruck, Karl: A Practical Method of Prophylactic Immunization against Tuberculosis, with Special Reference to Its Application in Children, Med. Rec., New York, 1912, lxxxii, 369.

It will be noted that all guinea-pigs died of generalized miliary tuberculosis and that all had involvement of lungs, liver, spleen, bronchial and mesenteric lymph-nodes, with the exception of one guinea-pig in which the spleen was free and one in which the liver was free. While one vaccinated guinea-pig lived much longer than any non-vaccinated, 150 days and 94 days, respectively, yet the average length of life was almost the same, 57.7 days for the vaccinated and 55.2 for the non-vaccinated.

TABLE 1.—VACCINATED GUINEA-PIGS INOCULATED NOV. 25, 1912

Pig No.	Weight 8/22/12 gm.	Weight 11/25/12 gm.	Amount of Inoculation, mg.	Date of Death	Life Following Inoculation, Days	Weight at Death	Necropsies
291	630	600	.01	12/27/12	32	510	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
292	585	750	.001	1/ 2/13	38	510	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
293	720	821	.1	1/10/13	46	530	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
294	730	900	.001	3/ 7/13	102	...	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
295	645	870	.01	1/16/13	52	570	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
296	540	750	.1	4/24/13	150	450	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, uterus, and bronchial and mesenteric lymph-nodes involved.
297	630	900	.001	1/10/13	46	600	Generalized miliary tuberculosis. Lungs, omentum, spleen, and bronchial and mesenteric lymph-nodes involved.
298	435	740	.01	1/18/13	54	480	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, uterus, and bronchial and mesenteric lymph-nodes involved.
299	570	660	.1	1/21/13	57.	390	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.
300	450	630	.1	1/18/13	54	450	Generalized miliary tuberculosis. Lungs, spleen, omentum, and bronchial and mesenteric lymph-nodes involved.

TABLE 2.—CONTROLS INOCULATED NOV. 25, 1912

Pig No.	Weight gm.	Amount of Inoculation, mg.	Date of Death	Life Following Inoculation, Days	Weight at Death	Necropsies
279	780	0.1	1 /16/13	52	465	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved. *A caseating abscess filled the omentum.*
280	1,110	0.1	12/29/12	34	465	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved.
281	570	0.1	1 /10/13	46	555	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved.
282	730	0.1	2 /27/13	94	650	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved.
283	630	0.01	1 /18/13	54	540	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved.
284	570	0.01	1 /19/13	55	360	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved.
285	600	0.01	1 /16/13	52	...	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved. One tubercle seen in right kidney. None in left.
286	510	0.001	1 /18/13	54	510	Generalized miliary tuberculosis. Lungs, liver, omentum, and bronchial and mesenteric lymph-nodes involved.
287	510	0.001	1 /20/13	56	435	Generalized miliary tuberculosis. Lungs, liver, spleen, omentum and bronchial and mesenteric lymph-nodes involved. Peritoneum studded with tubercles.

CONCLUSIONS

From our observations during these experiments, we must conclude that immunity was not produced by the vaccine, but it would seem possible that inasmuch as the vaccinated guinea-pigs became sick first, they were more susceptible at the time of inoculation than the controls.

I take this opportunity to thank Dr. W. Jarvis Barlow and the attending staff of the Barlow Sanatorium for their kindly interest and many helpful suggestions during the progress of this work.

1015 W. P. Story Building.

ACCIDENTS FOLLOWING THE SUBDURAL INJECTION OF THE ANTIMENINGITIS SERUM *

SIMON FLEXNER, M.D.
NEW YORK

The antimeningitis serum has been employed with constantly increasing frequency since 1906-1907, and those physicians who have come to have the widest experience in its use are unanimous in the opinion of its high therapeutic value. *Elaborate reports*[1] have now been published from America, France, Germany, and still other countries, and they agree in indicating that the reduction in mortality caused by epidemic meningitis and brought about by the serum is from two-thirds to three-fourths of the average percentages occurring in the same periods and places among the patients not subjected to the specific treatment. There is, at present, no other effective means of treatment of the disease known.

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* From the Laboratories of the Rockefeller Institute for Medical Research, New York.

[1] For bibliography see Flexner: The Results of the Serum Treatment in 1300 Cases of Epidemic Meningitis, Jour. Exper. Med., 1913, xvii, 553.

It becomes, therefore, a matter of great importance to discover and then to ascertain the reasons for any harmful effects arising in the course of the serum treatment and attributable to the treatment itself.

That an immune horse-serum can be safely injected into the cerebrospinal meninges in the lumbar region was first shown in connection with the antitetanic serum, which has been repeatedly injected in this manner without causing, so far as the reported cases indicate, untoward symptoms. That the antimeningitis serum can be administered with safety in the same manner is attested by large numbers of instances among children and adults who have been treated with the serum for suspected or established epidemic meningitis. But that accidents may sometimes attend the subdural injection of a foreign serum is obvious. The meninges are in such close anatomic relationship with the central nervous organs that what affects the one may come to affect the functions of the other. Moreover, in rare instances the injection of horse-serum itself has, as is well known, exerted an injurious action. It becomes necessary, therefore, not only to ascertain what the accidents are that may follow the administration of the antimeningitis serum, but to determine their causes and thus to separate those which are avoidable from those which, at present, may be unavoidable.

We may dismiss as unimportant the ordinary forms and grades of serum disease that follow the subdural as well as the subcutaneous or intravenous injection of horse-serum; but the mere fact of their occurrence should make us alert to the possibility that the severer effects of so-called anaphylactic shock may also, even if rarely, arise. Such an effect was indeed first described by me;[2] but it will perhaps be most useful to consider the severer types of accidents thus far reported. They have been, on the whole, small in number and may be considered according to the several explanations that have been offered for them. They have been variously attributed, first, to anaphylaxis; second, to rapid lysis of the meningococci; third, to excessive intracranial pressure; and fourth, to poisoning by the phenol preservative sometimes present in the serum. Certain physicians having had large experience with the serum have not reported them at all. In one or two instances, on the other hand, the number reported has, as compared to the number of cases treated with the serum, been large. This disparity itself emphasizes the necessity for a careful and critical study of the circumstances under which the severe symptoms have arisen.

I prefer to begin this consideration with the fourth possibility, since it has been brought forward by Dr. S. P. Kramer to explain several unfortunate results which came to his attention in connection with the administration of the antimeningitis serum in the Cincinnati Hospital.[3] Dr. Kramer has undertaken to account for them on the grounds that the serum in certain individuals is delivered into an open central canal of the spinal cord, through which it reaches in a concentrated form the fourth ventricle, at which point the phenol preservative has ready access to the respiratory center in the medulla, on which it acts injuriously, with the result that respiration is paralyzed. This explanation assumes, first, that the central canal of the spinal cord is open in many individuals and, second, that the disturbances of respiration are poisonous or toxic in origin. In order to support his hypothesis Dr. Kramer performed several experiments on dogs. The experiments consisted in the injection into the vertebral artery of a phenolized serum, or in surrounding the exposed medulla with a solution of phenol in water or serum, which procedures are said to have given rise to symptoms of respiratory failure simulating those following the subdural injection of the antimeningitis serum. Since no actual relationship exists between the conditions of these experiments and the conditions occurring in the subdural injection of the antimeningitis serum in human beings, they need not be regarded seriously; and this is particularly true since, as will immediately be shown, it is superfluous to invoke the presence of the phenol in the serum in order to account for the serious results mentioned.

Thus, if the explanation offered by Dr. Kramer is the correct one, no accidents should arise when a serum containing no preservative whatever is employed for subdural injection. The antimeningitis serum produced in France is prepared at the Pasteur Institute by Dr. Dopter and is called by his name. It is supplied in sterile containers, without preservative, and is merely stored for a time before use in order to remove the complement and reduce the risks of ordinary serum disease; and yet, in rare instances, serious symptoms, recalling those described by Dr. Kramer, have followed the administration of Dopter's serum. While it is true that the accidents are not, as a rule, fatal, yet in a very few cases death followed within a short time after the injection. It is, moreover, significant that the injection of the phenolized serum into the lateral ventricle is borne quite as well as its usual injection into the lumbar meninges. Now there does not exist a more direct path to the fourth ventricle than that of the cerebral ventricles. If, therefore, the mere presence of the phenolized serum within the fourth ventricle in children sufficed to bring about severe poisonous effects we should look for such a result from the intraventricular injections. And yet, not only has this not happened, but the latter injections have proved in several remarkable instances to be life-saving.[1] The accidents, moreover, have not been limited to children but have been observed in adults in whom a patent central canal of the spinal cord, if it exists at all, must be an extremely rare occurrence.

The experience with Dopter's serum, as well as with the intraventricular injection of the phenolized serum, disposes once and for all of the hypothesis of a toxic effect as accountable for the symptoms. We turn, therefore, to the consideration of anaphylactic shock resulting from the administration of the antimeningitis serum. In an early publication we described such an instance in a young child who, after receiving several injections of the serum in close succession without disturbing consequences, reacted severely to an injection made after an interval of sixteen days to counteract a relapse of the infection. The result was an acute anaphylactic reaction from which the child recovered only to succumb some days later to the meningitis itself. Since then some other instances of supposed anaphylaxis have been described in patients who had previously been injected with diphtheria antitoxin, or in whom, because of relapse, the injections of the antimeningitis serum have had to be resumed after intervals of days or weeks.[4] What is particularly impressive and reassuring is the fact that these severe reactions, which, theoretically, have been very much feared, have been, on the whole, very infrequent and, generally speaking, not fatal.

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[2] Flexner and Jobling: Serum Treatment of Epidemic Cerebrospinal Meningitis, Jour. Exper. Med., 1908, x, 141.

[3] Kramer, S. P.: A Possible Source of Danger in the Use of Antimeningitis Serum in Young Children, The Journal A. M. A., May 3, 1913, p. 1348; Lancet-Clinic, 1913, cix, 304.

[4] The reported fatal cases of this class have been as follows: Levy, Klin. Jahrb., 1911, xxv, 188, one; Hutinel, Presse méd., 1910, xviii, 497, two, one of which was complicated by tuberculous meningitis; Debove (cited by Hutinel, *loc. cit.*, p. 498), one; Chevrel and Bourdinière (L'hyg. gén. et appliq., 1910, v, 20), one.

But severe symptoms have also been noted to follow a first injection of the serum. The question therefore arises as to whether these have been in all instances examples of anaphylaxis corresponding to the severe shock that occasionally follows a first subcutaneous injection of diphtheria antitoxin.[5] This is indeed the crucial point. In certain of the instances reported by Dr. Kramer and Dr. Parmelee[6] a severe reaction followed, not on the first, but on the second or third injection of the serum, given at brief intervals. In these instances anaphylactic shock can be excluded. Dr. Parmelee kindly supplied me with a brief account of the cases from which I derive this conclusion. If, then, the effects under discussion are not due either to the poisonous action of phenol or to anaphylaxis, what is their cause?

In the course of the immunization of horses with cultures of the meningococcus for the purpose of producing the antimeningitis serum the fact has been noted that the intravenous injection of the cultures, which at first is well borne, later becomes a source of danger to the animals. That is to say, after a certain degree of immunity has been established the further injection of the meningococcus cultures directly into the veins produces such a severe effect on the animals that some of them die suddenly within a short time after the inoculation. In order to avoid this result it has been found necessary to carry on the immunization of horses by the slower but safer subcutaneous injection of the culture. Dopter has been especially impressed with this phenomenon and has undertaken to explain it on the supposition that the immune animal possesses the power of rapidly dissolving the introduced meningococci, through which lysis there is set free such a large amount of dissolved toxin that the animal dies of an acute poisoning. In support of this view he has observed that when guinea-pigs are inoculated with a mixture of meningococci and immune serum they succumb in a short time and in a manner recalling the sudden death of the horses; while this effect is not observed[7] when a corresponding amount of the meningococcus culture is inoculated without the serum. On the basis of these observations an attempt has been made to explain the severe symptoms sometimes following the first injection of the antimeningitis serum on the supposition that the serum brings about such a rapid dissolution of the meningococci within the cerebrospinal exudate as to cause an acute poisoning of the nervous system. This explanation is surely inadequate to account for most instances observed in man, since it does not apply to the cases in which severe symptoms arose but in which the number of meningococci within the inflammatory exudate has been very small and altogether insufficient to give rise to the soluble toxin in question, or in which the meningitis has been caused not by the meningococcus but by the pneumococcus.[8]

There remains one other possible source of the accidents, namely, that of increased intracranial pressure. In this connection it should be recalled that the severest symptoms relate to disturbance of respiration and in a far slighter degree to the heart's action. Usually the respiration fails while the heart may continue still to act well. For this reason artificial respiration has frequently sufficed to restore the patient. That a dangerous degree of increased intracranial pressure might be produced by the subdural injection of the antimeningitis serum was recognized at the inception of the serum treatment, whence it was advised to inject less serum than cerebrospinal fluid removed and not to employ maximal doses.[2] Because of the rarity of serious effects this warning has fallen more and more into disuse until now the rule is to give far larger doses of serum than were originally employed and often to disregard the relation of dose of the serum to age of the patient. It is necessary always to keep in mind the dangers arising from increased intracranial tension. Cushing, who has especially studied the condition experimentally and in human patients, states that the medullary center of respiration already impaired from compression endures an additional burden less well than a medulla not so embarrassed. He observed that in death from a fatal increase of intracranial tension the arrest of respiration precedes that of the heart; and he pointed out that in clinical states representing conditions of general compression, among which is acute meningitis, the tension of the fluid in the cerebral meninges more nearly corresponds with the degree of pressure capable of producing the symptoms of compression.[9]

We see, therefore, a close relationship between the effects of increased intracranial tension and the serious symptoms which have sometimes arisen on the injection of the antimeningitis serum. Koplik[10] early suspected this danger and therefore advised the substitution of the injection of the serum by gravity for injection by syringe. The employment of the gravity method has another important advantage, namely, that it permits the immediate withdrawal of fluid at the first sign of any embarrassment to the function of respiration. Recently a further safeguard has been introduced by Sophian,[11] who employs the registration of the blood-pressure to supply an ocular guide to the injection of the serum by the gravity method. Sophian has probably had the largest single experience in the personal administration of the antimeningitis serum and he reports some 1,500 injections without a single serious accident. From the effort to guard against this preventable danger Dr. Kramer has made the following wholly gratuitous assumption in his paper: "Indeed, so common has this catastrophe become that in a circular issued by the New

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[5] This has been the prevailing view. But the especial susceptibility of patients in a desperate condition at the time of injection, that is, fulminating or very severely ill and usually unconscious subjects, should arouse suspicion. Netter (Compt. rend. Soc. de biol., 1910, lxix, 12) has reported four such fatal cases among 100 patients treated by him; Hohn (Klin. Jahrb., 1908, xx, 368), one case among thirty-seven; Martin, of the Pasteur Institute Hospital (Paris Letter, THE JOURNAL A. M. A., Nov. 16, 1912, p. 1807), two cases among twenty treated, with which are to be compared the 7 cases of Dr. Kramer and the 8 cases of Dr. Parmelee. Most observers have not experienced them. Jehle (Wien. klin. Wchnschr., 1909, xxii, 619) refers them to status lymphaticus.

[6] Parmelee, A. H.: Epidemic Cerebrospinal Meningitis, THE JOURNAL A. M. A., March 1, 1913, p. 659.

[7] Briot and Dopter: Pathogénie des accidents observés au cours de l'immunization des chevaux contre le méningocoque, Compt. rend. Soc. de biol., 1910, lxix, 10; Action expérimentale du sérum antiméningococcique sur le méningocoque, *ibid.*, p. 126. Dopter, Ch.: Action bactériolytique comparée du sérum antiméningococcique sur les méningocoques et les germes similaires, injecté par voie veineuse, *ibid.*, p. 524; Le pouvoir lytique du sérum antiméningococcique est-il spécifique?, *ibid.*, 546; Différentiation du méningocoque et des germes similaires par l'"épreuve du péritoine," *ibid.*, p. 600.

[8] Netter, A.: Compt. rend. Soc. de biol., 1910, lxix, 12, 166. Netter, A., and Debré, R.: La méningite cérébro-spinale, Paris, 1911, p. 261.

[9] Cushing, H.: Mütter Lecture, 1901, Some Experimental and Clinical Observations Concerning States of Increased Intracranial Tension, Am. Jour. Med. Sc., 1902, cxxiv, 375.

[10] Koplik, H.: The Serum Treatment and the Prognosis, under Various Forms of Therapy, of Cerebrospinal Fever, Med. Rec., 1908, lxxiv, 557.

[11] Sophian, A.: A New Method for Controlling the Administration of Serum in Epidemic Meningitis, THE JOURNAL A. M. A., March 23, 1912, p. 843; Epidemic Cerebrospinal Meningitis, St. Louis, 1913.

York Department of Health, directions are given as to what should be done when breathing stops following the administration of the serum." The Commissioner of Health of the New York Department of Health has already replied to this unwarranted statement and intimated that the instructions for the administration of the serum were prepared to avoid the dangers the disregard of which may be followed by such serious consequences.[12]

If we now return to the consideration of the circumstances surrounding the treatment of the cases reported by Dr. Kramer, as well as those referred to by Dr. Parmelee, we at once notice the heaping up of unhappy accidents, while similar ones have arisen with rarity in other places. This fact alone suggests causes local in nature, since it can hardly be imagined that the extraordinary experience is the result either of anatomic conditions in the patients or peculiarities in the infecting meningococcus. So far as I have been able to make out, the doses of serum employed in the cases reported by Dr. Kramer, as well as those referred to by Dr. Parmelee, have, almost without exception, been maximal, and this is particularly true among the children in whom severe symptoms developed.[13] Moreover, there is no indication of the use of safeguards in the administration of the serum. The injections, as far as is stated, were made with a syringe. In a number of instances the accident occurred, not at the first, but at some subsequent injection of the serum, which itself is hardly consistent with the supposition of the action of a toxic agent. Altogether, it seems to me that the unhappy experiences can be explained more satisfactorily on the supposition that they resulted from increased intracranial pressure than that they were examples of anaphylactic shock. Since, in some instances, the severe symptoms did not arise on the first injection, but on the second or third injection of the serum, given in close succession, it is quite certain that anaphylaxis played no part. It is equally certain, in view of what has already been stated, that the phenol preservative can be excluded. There remain, therefore, two possibilities; namely, first, that the severe effects were caused by toxins liberated by the immune serum from the meningococci, which then must have been present in large numbers, or, next, that they were the result of excessive intracranial pressure. That they were not caused by meningococcus toxin is shown by the fact that in some of the reported cases the cerebrospinal fluid removed contained either few microorganisms or even none that were demonstrable in microscopic preparations. Hence, the indications are that either in all the instances, or in practically all, excessive intracranial pressure was the source of the accidents.

We must not lose sight of the essential fact that in epidemic meningitis the struggle is with a highly fatal disease and the one means now possessed to combat it is the antimeningitis serum. From this it follows that it is not justifiable to withhold the remedy in spite of some small risk, in view of the far greater dangers to which the patients are exposed by the disease itself. Nor is it always possible to ascribe serious symptoms to the serum even when they follow closely on the treatment. Sudden death in epidemic meningitis is a not infrequent occurrence; and cases have even been reported in which death has taken place while the physician was engaged in getting ready to make the serum injection and even before lumbar puncture had been performed. The attempt to discredit the antimeningitis serum on the basis of an unfortunate experience seems, when everything is considered, hardly defensible.

EXPERIENCE WITH OVER ONE THOUSAND CASES OF A FORM OF CHRONIC URETHRITIS *

SYLVAN H. LIKES, M.D.
AND
HERBERT SCHOENRICH, M.D.
Visiting Physicians in Dermatology and Genito-Urinary Diseases to the Hebrew Hospital of Baltimore
BALTIMORE

It is generally conceded that there are few conditions more nerve-racking or distressing to a person than an infection with a venereal disease. This is particularly manifested and emphasized in those afflicted with a long-standing urethritis. The serious nature of the maladies which may be acquired through sexual intercourse is being daily impressed on the public by the dissemination of literature bearing on this subject. Most men are already cognizant of these dangers, however, either in having been victims themselves, or from knowing the experience of others. The patient has to bear not only the physical suffering incident to venereal diseases, but also the mental distress due to the embarrassing secrecy of the situation, to the objectionable restrictions, which frequently cause humiliation, to fear of exposure, to the danger of infecting others, and to the possibility of the many painful and serious complications. However well-recognized these facts may be, they apparently do not and never will deter men from gratifying their sexual inclinations. Therefore it becomes incumbent on us to give this class of patients our earnest attention and best endeavors.

A study of the mental attitude assumed by men regarding the condition of their sexual organs is interesting. We have found most patients to be safe and sane, fortunately, so that they will follow instructions fairly well and persist in the treatment, even if it is weeks or months before they are pronounced cured. Then there is the highly nervous or ultraconservative man who is more or less of a fanatic or neurasthenic. He persistently complains and worries over the most trivial conditions, exaggerating every symptom and pain, however insignificant. When a patient of this class has gonorrhea, he acquires the objectionable habit of stripping the urethra at frequent intervals, following the stripping with a macroscopic examination of the urine. Should he find any discharge, whatever the quantity or character, or should the urine contain the minutest shreds, it will prey on his mind, causing despondency, and psychic disturbances out of all proportion to the disability. It is not always the ignorant who make up this class, many being the more intelligent patients. Finally, we have the reckless fellow who is too ignorant or too careless to understand the serious nature and grave consequences incident to venereal infections and fails to realize that the essential step in promoting a cure is proper attention. He believes that the absence of a purulent discharge in gonorrhea is significant of a cure, and neglects medical advice, especially when the treatment in any way inconveniences him. He restricts himself to nothing, and permits his condition to run on from bad to worse, possibly infecting others as well as jeopardizing his own welfare.

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[12] Lederle, E. J.: The Treatment of Cerebrospinal Meningitis with Specific Serum, Lancet-Clinic, 1913, cix, 485.

[13] Dr. Kramer's patients received serum as follows: In a child of 10 months 20 c.c. of cerebrospinal fluid were removed, and 20 c.c. of serum were injected; in one of 4 years 30 c.c. of cerebrospinal fluid were removed and 30 c.c. of serum injected; in one of 3½ years 20 c.c. of fluid were removed and 15 c.c. of serum injected; in one of 7 years, 45 c.c. of cerebrospinal fluid were removed and 40 c.c. of serum injected; in one of 5 years, 25 c.c. of cerebrospinal fluid were removed and 37 c.c. of serum injected; a second injection of 30 c.c., on the next day, produced no symptoms; the following day 30 c.c. of fluid were withdrawn and 30 c.c. of serum injected, followed by death; in one of 10 years, 40 c.c. of cerebrospinal fluid were removed and 40 c.c. of serum injected; in one of 9 years, 50 c.c. of cerebrospinal fluid were removed and 40 c.c. of serum injected.

Dr. Parmelee's patients who succumbed after the first injection were adults. There is no record of the quantity of cerebrospinal fluid removed. They received respectively 45 c.c., 45 c.c., 40 c.c., and in one case the quantity is not mentioned. The patients who succumbed after the second injection included a child of 5 years, in whom the first dose was 20 c.c. and the second 15 c.c.; an adult of 50, in whose case the record states merely that 45 c.c. were given in all and does not refer to the cerebrospinal fluid removed; an adult of 40 years, who is said to have received 30 c.c. in all; and a child of 2 years, who received 25 c.c., and twelve hours later 20 c.c., and regarding whom it is not stated whether or not cerebrospinal fluid was removed.

* Read at the One Hundred and Fifteenth Annual Meeting of the Medical and Chirurgical Faculty of Maryland, April 22-24, 1913.

In the treatment of a urethritis it first becomes necessary to ascertain the nature of the most important symptom, namely, the discharge, particularly if gonococci are the underlying cause. However simple this may be in acute cases, in chronic conditions it is not always an easy matter to determine and, as the treatment in non-gonorrheal urethritis is so essentially different, it is of paramount importance to prove decisively the presence or absence of the gonococci.

It is not our intention to go into detail as to this examination, but, speaking generally, it includes:

1. A microscopic and bacteriologic examination of the urethral, prostatic and seminal vesicular secretions obtained by the usual procedure of massage, etc., and of the urinary sediment. The possibility of the prostatic utricle and Cowper's gland harboring the infection must also be borne in mind. These examinations to be made under favorable, and if found negative, under unfavorable conditions; namely, after the drinking of alcoholic beverages, preferably beer, after exercise, and after the anterior urethra has been irritated by the passing to and fro of an aboule (bulbous bougie), the largest that the meatus will admit. The procedure last mentioned is important for it not only helps to reveal the condition of the anterior urethral mucous membrane but, after its application, gonorrheal organisms which have been deeply imbedded in the mucous membrane or particularly in the follicles and infiltrated areas, and have there assumed a more or less latent state of activity, will again show their presence in clinical manifestations and may then be detected by the usual bacteriologic examination.

2. The complement-fixation test. This test is based on the same theory as the Wassermann test in syphilis. Mueller and Oppenheimer[1] deserve the credit of being the first to describe this test, and for having performed it on patients suffering with gonorrheal arthritis. The stumbling-block has been in the antigen, owing to the fact that the different strains of gonococci serologically act independently. Schwartz[2] and McNeil prepared polyvalent antigens and found that the one containing twelve strains gave the best results. The test promises much for the future as a means of testing the presence of gonococci in the human body.

When non-gonorrheal, the discharge may be due to a variety of causes:

1. It may be due to infections with other organisms, such as the colon bacillus, the staphylococcus, the tubercle bacillus, *Micrococcus catarrhalis*, etc.

2. The discharge may be secondary to non-gonorrheal prostatitis, manifested by a more or less indurated, large or normal-size gland, the secretion showing pus-cells with or without organisms.

3. The discharge may be non-bacterial, due to gouty, rheumatic or lithemic disturbances, or to traumatism.

4. The discharge may be due to a urethritis secondary to a cystitis or pyelitis, or occurring during the course of an eruptive fever. Syphilis and grippal infections also occasionally give rise to a urethritis.

5. The discharge may be due to granulations and infiltrations of the urethra (non-gonorrheal).

In our experience the last-named form, granulations and infiltrations of the urethra, outnumbers by far all the others in making up the list of non-gonorrheal urethral conditions; and it is on this class that we desire to lay particular stress.

GRANULATIONS AND INFILTRATIONS OF THE URETHRA

The condition was described first by Otis and later by Oberlander, who made urethroscopic studies of the urethra and described these pathologic areas more or less minutely and divided them into soft and hard infiltrations.

The soft infiltrations are localized foci of round-cell infiltration chiefly around the urethral glands, the forerunner of a connective-tissue change. Slightly elevated granular areas or distinct granulations may also be seen. The catarrhal condition present over these areas and the desquamated epithelium is the source of the discharge found at the meatus. Hard infiltrations, the advanced stage of the soft, show that connective-tissue formation has taken place. The walls of the canal in these places are harder, owing to the presence of fibrous tissue. Distinct narrowing (beginning stricture) is observed. It is not our aim to differentiate the varieties of these urethral infiltrations, but to locate them, irrespective of their condition, whether hard, soft or medium, and to give the method and urge the importance of the restoration of the urethra to its normal caliber and distensibility.

The usual symptoms of this form of urethritis consist of nothing further than a more or less purulent drop which collects at the meatus from time to time, or is seen only after stripping the urethra, particularly in the morning—the notorious "morning drop"—or when the patient has refrained from passing urine for some hours. There is little or no pain, except perhaps during periods of intense sexual excitement. There is no disturbance in micturition, but the urine in the first glass will invariably contain shreds, that in the second and third being clear; or, if the anterior urethra is first washed out, all glasses will contain clear urine. Trifling as these manifestations may be, it is just such patients who run from one physician to another and undergo the extremes of treatment. Advised by some to let it alone, in the hands of others they go through the whole gamut of treatment—prostatic massage, irrigations, instillations, injections, vaccines, serums and instrumentations of various kinds and degree, to say nothing of balsams, *ad nauseam* for not only the patient but also the doctor as well. Realizing the importance of relieving this class of patients both physically and mentally, we have pursued the following method:

After a thorough examination has proved the absence of the gonorrheal organisms or other infections, or of any involvement of the posterior urethra, prostate and other adnexa, we may be certain that the focus of trouble is in the anterior urethra. This can and must be found by the introduction of an aboule of sufficient caliber to stretch the walls of the urethra, so that in contradistinction to the normal smooth mucous membrane the granular and infiltrated areas may be felt as rough spots or perhaps as actual obstructions. It is our belief that the degree of distensibility of the normal urethra is far greater than is generally taught and accepted; consequently we find that to demonstrate these pathologic lesions requires instruments of much larger caliber than commonly employed. An aboule, the largest that the meatus will admit, may or may not detect these spots; for instance, the urethra may feel perfectly smooth with No. 30 F., but with No. 33 F. distinct roughness will be observed, and a 35 F. may be arrested at this thickened area. Another urethra may feel smooth with 33 F. and require a 35 F. to detect the pathologic areas. As the caliber of the urethra varies in different individuals we cannot place the normal at any fixed number. It may be put down, almost as an invariable rule, that when the symptoms as described are present, the proper search of the anterior urethra with the proper size aboule will surely detect the area whence the morning drop or mucopus has its origin. The one thing above all others likely to interfere with the proper search of the urethra to detect these infiltrated areas is a meatus too small to admit an aboule of sufficient size. It is an anatomic fact that the meatus is the narrowest point of the urethra; therefore, should the meatus be of insufficient caliber, one need not hesitate to perform a meatotomy and remove the obstacle which blocks the way for the proper examination and future cure. Indeed, if the infiltrations are near the meatus, which is often the case, the meatotomy alone without subsequent dilatation will effect a cure.

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[1] Mueller and Oppenheimer: Wien. klin. Wchnschr., 1906, No. 19, p. 894.

[2] Schwartz: Am. Jour. Med. Sc., 1911, cxli, 693.

AUTHORS' METHOD OF TREATMENT

Our method for performing meatotomy has already been described in detail.[3] Briefly, it consists in suturing the edges of the skin and mucous membrane on either side of the median incision on the floor of the urethra. This suturing of mucous membrane to skin leaves no raw surfaces to give rise to troublesome bleeding or possible agglutination of the cut edges which would afterward necessitate their being pulled apart, or kept open by the use of plugs. The freedom from pain, annoyance and discomfort experienced by the patient after meatotomy done in this way justifies one in making use of this operation more frequently, especially as it so markedly facilitates the dilating process.

In addition to the ordinary bougies, various instruments, particularly the two-bladed dilators of Oberlander and the four-bladed dilator of Kollman, were devised for the purpose of removal of these areas of infiltration. These dilators have the advantage of not requiring a large meatus, but the many objectionable features outweigh the advantages. Some of these are that the dilatation is not uniform; in hard infiltrations the dilator yields rather than the thickened area itself; furthermore, asepsis is carried out with difficulty and the instruments are expensive, fragile and easily broken. In the event that a meatotomy was necessary, and allowing sufficient time for the proper healing of the wound, a fairly large aboule, about a No. 30 F., is introduced into the urethra as far as the bulb. Any obstructions or rough spots may easily be felt by the examiner, particularly as the instrument is being withdrawn. Should nothing be detected with a 30 F., larger sizes are introduced one after another until one of sufficient caliber is reached that will detect these areas. The number, extent, character and location of the areas should be noted, but the technicalities of the actual measurements with various instruments devised for this purpose are entirely superfluous and have no practical bearing on the future treatment.

To obtain the best results in the removal of these infiltrations it is imperative to make each treatment as painless as possible. This may be successfully accomplished by a simple method of using the local anesthetic. The technic consists in introducing into the urethra a ⅛-grain cocain tablet as far back as the bulb. This is easily executed with a bayonet-shaped ear-forceps well lubricated with glycerin or other lubricant, preferably one which is not oily. Four of these tablets are required to produce the necessary anesthesia. They are deposited in the urethra, beginning at the bulb, the last one being at the meatus. With the fingers closing the meatus, the canal is massaged so that the cocain is well and effectually distributed. The advantage of this method over the use of solutions is that not infrequently the solution, unless precautions are taken, will pass back into the bladder and thus fail to accomplish its desired purpose. Furthermore, it is less dangerous and incidentally less expensive, for the amount of cocain employed is much smaller than when used in solution. We have followed this method thousands of times and have yet to see the slightest untoward symptoms.

Allowing five minutes for the cocain to act, a straight or curved bougie of the same caliber as the number of the aboule with which the pathologic areas were previously detected, is introduced into the urethra as far as the bulb. Gentle massage over the now distended urethra may be used, although this is not absolutely essential. The instrument is allowed to remain *in situ* for five minutes unless the introduction was easy and accompanied with but little resistance, in which case it is withdrawn and the next size inserted and allowed to remain. The amount of bleeding likely to follow this instrumentation will of course depend on the extent to which these infiltrations have been stretched and broken.

The interval before the next treatment, and the decision whether the same number bougie or one of larger caliber should be used, depend wholly on the amount of reaction following the previous treatment, namely, bleeding and pain. In any case it is advisable in subsequent treatments to begin with an instrument of the same size as that employed on the previous occasion, and then to follow it up with the next number. Naturally a great deal will depend on the judgment and experience of the operator to determine the length of time between treatments and how much to do at each one. The old adage, "more haste less speed," is appropriately applied here and should be borne in mind. In our experience we have found that the intervals between treatments should never be less than five days, and as larger instruments are indicated, the caliber should never exceed one number at a time and preferably not more than one number per treatment.

It is well from time to time to examine the urethra with various sizes of aboules, to note what progress has been made toward ironing out the rough areas which, in order to be detected, would now require an instrument of larger size. For instance, a No. 34 F. aboule which might previously have been arrested or might have caused considerable bleeding in its passage, can now be passed easily with little or no hemorrhage following. The treatment along these lines should be continued until an aboule from five to ten points larger than the one originally used can be passed through the urethra without being arrested and without causing much bleeding. When this has been accomplished and sufficient time, generally about two weeks, has elapsed after the last treatment for the resulting soreness and edema to disappear entirely (the edema in our opinion acting like Bier's passive hyperemia and helping to absorb the inflammatory products), it will generally be found that the mucus will no longer appear and the shreds be so reduced in quantity that probably only a few flakelets will be left. Should the treatment, however, not have the desired result, the stretching process must be resumed and the urethra dilated up to a higher point. One may feel almost certain that with the proper degree of stretching, differing in different individuals, a cure will almost invariably result when the treatment is carried out to a sufficient extent to restore all parts of the anterior urethra to its normal caliber. It will rarely be found necessary to use any injection treatment or internal medication; but it is suggested that occasionally smears be made. In the event that numerous organisms are found, mild non-irritating injections will not be amiss.

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[3] Likes, Sylvan H., and Schoenrich, Herbert: Meatotomy: A Simple Method, The Journal A. M. A., May 3, 1913, p. 1359.

While we recognize the excellent work and achievements so recently accomplished by improved urethroscopes in the posterior urethra their application in the anterior urethra has not in our experience given the same gratifying results, except for diagnostic purposes.

No attempt has been made in this article to tabulate the results in the large number of our cases of this form of urethritis, extending over a period of many years, or to append burdensome statistics of the percentages of cures and failures; but our results have been so uniformly gratifying and successful that we do not think it amiss to direct the attention of the profession to this phase of anterior urethritis. We believe that if these fundamental facts are borne in mind, valuable service can be rendered by this simple method of careful and thorough exploration of the urethra, with subsequent systematic dilatation, and that a class of patients who are frequently a bugbear to the practitioner as well as to the specialist may be permanently cured. These patients often give a history of having gone through a variety of treatments, conscientiously following all forms of restrictions necessary and unnecessary until they become mental and physical wrecks; and incidentally financially embarrassed and thoroughly disgusted with themselves, the doctor and gonorrhea.

1134 Linden Avenue.

CASE OF (SYPHILITIC?) ULCER OF THE BLADDER

IRVING SIMONS, B.S., M.D.
NASHVILLE, TENN.

On account of the rarity of ulcer of the bladder, in behalf of its successful treatment, and lastly, on account of some unique features in this particular case, it occurred to me that it might be worth recording.

History.—The patient, P. J., male, aged 24, house-painter, married, denies gonorrhea and lues. He has three healthy children; all have come under observation, and have been thoroughly examined. Wife has had no miscarriages. For almost two years he has had hypogastric pain, dull and dragging in character; it was at first intermittent, but now has become practically continuous day and night. Pain increases as soon as the bladder becomes even moderately distended with urine, so that he has been voiding about every hour daily, and during the last six months about five or six times at night. He experiences relief after emptying the bladder. There is no loin pain, or pain suggestive of either renal or ureteral stone. He has never noticed any abnormality in the urine passed at any time. He complains of dyspnea practically all the time, even on very slight exertion. About a year ago he had an attack of weakness, loss of appetite, some fever (?), and lost 15 pounds in weight; was suspected of being tuberculous.

Record of Micturition.—Patient voided urine, November 11, at 6:00, 7:20, 8:00 and 8:25 p. m.; three times during the night; at 6:00 a. m., November 12, and three times from 6:00 to 11:00 a. m.—during seventeen hours, eleven times.

Examination.—(Abstract) November 12: Negative, except for the following: Lungs: A few subcrepitant râles heard just above the left clavicle at the end of inspiration. Abdomen: Not tender to pressure. Prostate: Somewhat generally enlarged; not tender; no nodules felt. Urine: Several examinations showed clear, amber, acid urine without sediment; normal except for the presence of a moderate number of white cells in centrifuged specimen. These were present in every examination. No red cells present. Urine repeatedly negative for tubercle bacilli.

Course.—December 3: Stone searcher passed; no stone felt. December 5: Cystoscopy. In the region just behind the trigone several round ulcers with clean-cut edges, about twice the size of a normal ureteric orifice; on one of them an attached blood-clot. Left ureteric orifice not enlarged, but covered with a bit of mucus. Right ureteric orifice somewhat irregular, due to the proximity of a larger irregular, ulcerated patch adjoining it on its lateral aspect. Just mesial to the right ureteric orifice and in the trigone, a very small reddened spot, resembling a tubercle that has not yet ulcerated.

A few bladder irrigations were given with silver nitrate, but patient passed from observation until six weeks later, when he returned, complaining of exacerbation of the condition, especially of the hypogastric pain. Urine showed red as well as white blood-cells.

January 22: Cystoscopy: Entire trigone and small part of post trigonal region looked raw, angry, red; markedly injected; no distinct ulcerations seen. Indigocarmin injected and a dark blue stream appeared from both ureters in twenty minutes.

On account of lack of satisfactory improvement under local treatment, a complement-fixation test for syphilis (Noguchi method) was done February 15, and proved positive.

Deep injection of mercury salicylate in ordinary doses about four or five days apart were instituted, and after the fifth injection the patient was symptomatically cured of the hypogastric pain and frequent micturition. Five more injections were given, and treatment stopped March 17.

A second Noguchi reaction done April 5 (and done with great care, along with several slightly positive serums) proved absolutely negative.

Cystoscopy on April 15 showed a normal bladder.

At the present time, May 30, 1913, the patient remains symptomatically cured.

This case, while not unique, is, I believe, worth recording. The presence of ulcers in the bladder, the failure to respond to treatment with the usual drugs, the positive Noguchi reaction, the rapid disappearance of the symptoms after a few mercurial injections, and the negative Noguchi reaction following these injections, would suggest a diagnosis of syphilis of the bladder.

Objections could be raised on the ground that some chronic inflammatory processes are favorably affected by the injection of mercury; and it is to be inferred that this is the point of view taken by Buerger in his second case of bladder ulcer in which, because the lesion did not react to fulguration, he advised and obtained a cure with mercurial injection in the presence of a negative Wassermann.[1]

In favor of the syphilitic etiology is the fact that along with the cure due to the deep injection of mercury the complement fixation reaction became negative. This is of importance, because it is a substantiated fact that in cases with non-specific positive reactions the non-specific amboceptor in the patient's serum does not, as a rule, disappear after the institution of mercurial treatment.

Whether this case is the result of inherited syphilis can only be suspected. In favor of this, however, is the absence of any syphilitic manifestations in any of the third generation, who have been thoroughly examined, and the absence of history of miscarriage of any of the issue.

I regret that photographs of the bladder lesion were not made at the first cystoscopy. They were seen at that time also by Dr. E. M. Sanders, who agreed with me that tuberculosis was the most probable diagnosis. A careful reading of the description will show that we were somewhat justified in this tentative diagnosis.

For the Noguchi tests I am indebted to Dr. R. L. Jones of the City Board of Health.

132 Eighth Avenue North.

ADVANCED TREATMENT OF PUERPERAL INFECTION *

ROBERT T. GILLMORE, M.D.
CHICAGO

The history of the treatment of puerperal fever parallels our most intricate problems. It has taken many years and many headstones to enable us to read the handwriting on the wall and abandon the indiscriminate uterine curettage, uterine and vaginal douching, hysterectomy and vaginal drainage, and dissection of thrombosed veins. This does not seem strange when we pause to consider the difficulty which the average author of medical books experiences in eliminating the traditions of medicine from his text. Added to this is the chaotic status of our nomenclature, which has not reached a universal classification. While it necessarily limits our conclusions to those drawn from personal experience, it also deprives us of accurate statistics which could present clearly defined pictures and furnish us with valuable data on which we could formulate a rational medical procedure. This unfortunate condition is not limited to America; the nomenclature is equally as unreliable in European medical centers, even among those who speak the same language and are of the same nation.

Owing to the confusion associated with the title "puerperal infection," I take the liberty of defining my personal interpretation of the term. Puerperal infection includes all local and general infections following abortion and labor either premature or at term, in which the primary focus is in the pelvis.

The exciting cause is one of the pathogenic bacteria: streptococcus, colon bacillus, staphylococcus, pneumococcus or gonococcus. I have no intention of covering the milder infections in this paper, such as those caused by the colon bacillus, staphylococcus or gonococcus and the mixed infections, all of which frequently escape detection and are classified by the medical attendant as milk fever, malaria, typhoid, or "cold."

The graver forms of puerperal infections are those due to the streptococcus, occasionally the pneumococcus, and require the most careful management to conserve the vitality of the patient. In this type any operative procedure, the derangement of the stomach by medication, or even allowing the baby to nurse from the mother's breast, may be the determining factor in a fatal termination of the disease.

For the intelligent consideration of this important subject, the following points must be considered:

1. Puerperal infection is not usually a local disease but is a general infection or bacteriemia, and the micro-organism may be detected in the blood-stream by making a blood-culture. This is clinically demonstrated by the complication of endocarditis, pyelitis, pleurisy, phlegmasia alba dolens and other remote infections.
2. The primary focus is located in the parturient canal, endometrium, tubes, cervix, vagina or perineum, and is secondary in importance to the general infection.
3. In the severe bacteriemic, or general infections, the streptococcus is usually responsible. The pneumococcus, a variety of streptococcus, is sometimes found.
4. When there is a pyemia some variety of the staphylococcus or the colon bacillus is usually the cause. This organism does not multiply in the blood-stream as does the streptococcus, and is usually localized.

In order to inaugurate a rational treatment in puerperal infection, it is imperative to ascertain by a blood-culture the germ causing the infection. This is accomplished by applying a tight bandage to the upper arm and puncturing the distended median basilic vein with a large needle under careful aseptic technic, and drawing out about half an ounce of blood into a sterile glass container. From this specimen an autogenous bacterin is made. It requires five days to be absolutely certain that no other living germ is present; consequently it is wise, after the micro-organism has been isolated, to start in a bacterin treatment first with 15 c.c. of serum intravenously to be followed with a reliable stock vaccine.

TECHNIC FOR MAKING AN AUTOGENOUS VACCINE

The simplest and best method is by means of a clot-culture. Five c.c. of blood are drawn and placed in an ice-box for eight hours to cool. The serum which contains the antiseptic properties of the blood is removed with a pipet. The blood-clot is removed to a sterile container and incubated, eighteen hours for the streptococcus and twenty-four hours for the colon bacillus and staphylococcus. A smear is made for microscopic examination. Agar-agar is smeared with normal blood and a mass-culture made by inoculating it from the blood-culture, and incubating for eighteen hours. The streptococci are removed by suspending the mass-culture in sterile, normal salt solution. This suspension is now a concentrated bacterin with living germs.

The number of germs is determined by counting a drop of the serum from the red pipet which has been diluted with 1:20 carbol fuchsin. The counting method is the same as that which is used in making a blood-count, and will give the number of germs in 1 cm. With this number as a basis, any desired number of bacteria per cubic centimeter may be prepared by diluting with sterile normal saline solution.

The killing of the micro-organism is ordinarily accomplished by heating to 56 or 60 C. (132 or 140 F.) for one hour, or by some chemical means. Greater heat than 60 degrees produces a chemical change that renders the germ therapeutically inactive. This change frequently occurs if the germs are heated to 70 C. (158 F.) for one hour, as some text-books recommend. One heating at the proper temperature is sufficient. When the bacterin is prepared, its sterility remains to be determined. There is a possibility that it has been contaminated with organisms, especially tetanus bacilli. This is determined by the ordinary bacteriologic method of plating out and examining after incubation for twenty-four hours of growth.

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[1] Buerger, Leo: Ulcer of the Bladder, THE JOURNAL A. M. A., Feb. 8, 1913, lx, p. 6.

* Read before the Kane County Medical Society, May 7, 1913.

The bacterin is next examined for tetanus, by inoculating 1 c.c. of bacterin into 25 c.c. of freshly boiled glucose bouillon. The air is driven out by covering the culture with sterile paraffin, which produces an anaerobic condition. The culture is incubated for seventy-two hours, and 1 c.c. of this culture is injected into the root of the tail of a white mouse. If tetanus bacilli are present, the mouse will develop symptoms of tetanus toxemia within ten hours. It is customary, but not necessary, to preserve the bacterin by the addition of 0.4 per cent. of trikresol.

When a patient suffering with streptococcus infection recovers, she passes through two stages:

1. The bacteria in the blood have become opsonized by the antibodies produced by the bacteria.
2. The opsonized bacteria have been devoured by the leukocytes.

It is therefore apparent that if we are to obtain results with autogenous vaccine, the patient must have within herself the power to opsonize the bacteria, as well as a sufficient number of white blood-corpuscles to consume the opsonized bacteria. Clinical experience demonstrates that the administration of vaccines is unsatisfactory unless there is a leukocytosis above 15,000. When the count is below this number, the administration either hypodermically or orally of nuclein is indicated. Observations have been made in which the leukocytosis has increased numerically within an hour after the administration of nuclein. Cold bathing, salicylic acid and pilocarpin also increase the leukocytes.

Negative Phase.—After the first injection of a small dose of vaccine — 15 million — the antibodies are decreased with a falling of the opsonic index. This is followed by a rise of the opsonic index, due to a reaction on the part of the patient. This phase is recognized clinically by a slight rise in temperature and an increase in the discharge from the wound. If there is a decided rise in temperature, the vaccine dose has been too large.

Failure to obtain results with the vaccine treatment is due to one of the following causes:

1. The exciting cause, or the proper organism, has not been found.
2. The initial dose may have been so large that the patient has been overwhelmed. Bacterin is a toxin, not an antitoxin, and is administered in order that the individual may acquire the ability to produce antibodies.
3. While the vaccine may act as an antibody on the bacteria present, if there is not a sufficient number of leukocytes to dispose of the bacteria, the bacterin administered is therapeutically ineffective.

Before instituting treatment for puerperal infection, make a thorough physical examination of the patient, including a bimanual pelvic examination, with inspection of the perineum and a urinary analysis. In making a white blood-count, remember that there is normally a leukocytosis during pregnancy and the puerperium.

NON-OPERATIVE TREATMENT OF AN UNCOMPLICATED CASE OF PUERPERAL INFECTION

1. The patient should have complete rest, physical and mental.
2. A well-ventilated room should be selected in which there is plenty of sunshine.
3. Drainage should be favored by the Fowler position.
4. The hyperpyrexia should be controlled by cold sponging and an ice-bag on the head. In the case of a local pelvic inflammation, an ice-bag should be applied over the affected area. Elimination is an important factor and should be favored by both the bowels and the kidneys. The drop method of introducing normal saline solution into the rectum is desirable, as it saves the stomach, allays thirst and favors elimination by the kidneys.
5. As it requires five days to make an autogenous vaccine, first a serum or antitoxin should be administered to be followed by a reliable stock vaccine if the blood-count is favorable and there is an indication that the patient lacks sufficient reaction to combat the infection.
6. The stomach should be carefully guarded. All useless medication, whisky, quinin, etc., should be avoided, and the stomach practically reserved for nourishment only. Feed the patient carefully, at regular intervals. Discontinue breast-nursing unless the mental effect is too depressing in the mother's weakened condition.

OPERATIVE TREATMENT

This is positively limited to absolute indication. Uterine curettage is to be recommended only for a hemorrhage, which indicates that there is a foreign body in the uterus. When this procedure is decided on, the patient should be put under scopolamin and morphin, or a gas anesthetic, and with careful aseptic preparation, the operator wearing rubber gloves, the cavity of the uterus is explored and carefully cleaned out with gauze wrapped around the finger. I clean out the uterus if any of the placenta has been left after delivery. The consensus of opinion is that the uterus should be left alone in the event of the retention of the membranes. The objections to the indiscriminate curettage with the sharp curet or anything that will produce much traumatism is that there will be a breaking down of protective membrane with the liability of a dangerous amount of toxin or bacteria into the blood-stream.

Should a pelvic abscess develop, the indications are for an extraperitoneal drainage, preferably by the vaginal route, and under gas or scopolamin and morphin as an anesthetic.

Conservative surgery is the watchword of the advanced gynecologist. Palliative measures should always be tried before a radical operation is considered. In the lying-in period, pyosalpinx demands the same procedure as would be indicated otherwise. A radical operation must not be attempted until pyosalpinx becomes chronic. This is determined by a normal temperature and a low leukocyte count. The operative procedure in acute pyosalpinx should not exceed vaginal drainage except in rare instances.

In those unfortunate cases of uterine multiple abscess there is authority for considering the necessity of removing the uterus, but in considering the extirpation of this organ in puerperal sepsis, I agree with J. von Veit of Halle, Germany. After weighing his own and his contemporaries' results, he believes that in those cases in which the puerperal sepsis has become alarmingly general and the blood is swarming with streptococci, the removal of the uterus is decidedly a doubtful procedure. When there are few streptococci in the blood, the patient will recover without a hysterectomy. When the streptococci are confined to the lochia, the operation is contraindicated.

In the event of stitches having been placed in the perineum, they should be removed if there is any redness indicating a local infection.

CONCLUSION

In closing, I earnestly desire to emphasize the necessity of resisting the temptation to give vaginal and uterine douches. The discharge, if any, should not be washed away with an antiseptic, as such a procedure inhibits the antiseptic action of the normal secretions and prevents the phagocytic action of the white blood-cells on the bacteria. In no disease which confronts us are we so tempted to resort to some active measure, and in no other disease has our patient's reserve force and resistance such need of conservation.

31 North State Street.

CONSERVATIVE TREATMENT OF SOME AURAL AND NASAL CONDITIONS BY HOT AIR AND IODOFORM

A SIMPLE AND PRACTICAL METHOD

EDWARD J. BROWN, M.D.
MINNEAPOLIS

The unsatisfactory, not to say dangerous results of much of the nasal and nasal-sinus surgery of radical character which has prevailed during the past few years are now being recognized more generally, and conservative methods of treatment are being developed. Such agencies as negative pressure and hot dry air have been somewhat extensively used and praised; but Jonathan Wright[1] questions the therapeutic value of the former in sinus disease, and the dry hot-air treatment of ear and nasal suppurations has failed to become popular largely because of the inconvenience and unreliability of the available means of its application. During the past year I have made rather extensive use of hot air and nascent iodin, following the publication of a paper by Dr. C. J. Koenig[2] of Paris.

Complicated and expensive apparatus is wholly unnecessary. My latest and simplest heater consists of section of brass gas-tubing, 3 inches long, one end of which screws onto the burner extremity of a two-jointed gas bracket. The latter is attached to the compressed-air service-pipes by means of curved sections of similar brass tubing in such way that a 10-cent gas-heater slipped over the burner of a two-jointed gas bracket (the gas and compressed-air service-pipes being in close proximity) can be swung under the curved brass tubing. To the distal end of the small piece of tubing is soldered a conical reducer which will fit either a by-pass compressed-air exhaust or a soft rubber tube for conducting the hot air into the nose or throat or ear. If it be desired to use any form of powder, the heater can be unscrewed and the medicament introduced, absorbent cotton first being placed in the small end to guard against its sudden exit.

For convenience I have another heater which, instead of being screwed to the compressed-air bracket, screws lightly into a small iron gas-cap to which is clamped a wooden handle. The gas-cap is perforated by an opening through which it may be connected with a similarly arranged compressed-air bracket at my operating-chair. A pressure of air sufficient for effective negative pressure is so destructive of rubber tubing that the metal tubing is a great relief. The heater as described can be held by the handle over the Argand or other gas-light, and in half a minute or less acquire sufficient heat to vaporize iodoform. A politzer or atomizer-bulb or even a mouth-tube will enable the physician to force the vapor into ear or nose, if not provided with compressed air. For use away from the office when a continuous stream of hot air was desired, I have connected the little heater with a coil of brass tubing (easily made from a few feet of $\frac{1}{8}$-inch tubing) and a bicycle pump. A kerosene lamp, if nothing better, as a source of heat can be found in almost any house. Such an apparatus is dependable, controllable and efficient as well as inexpensive.

REPORT OF CASES

Case 1.—Mrs. F., aged 72, a sufferer for many years from deafness of the left ear and nasal sinus disease, was operated on in April, 1912, for the removal of caries of the superior mastoid cells, a recurrence following a Heath operation of the year before. In spite of persistent treatment a sinus extending from the attic to a point high up in the greatly enlarged external canal was present the middle of August, with granulations in the tympanum and considerable purulent discharge. There were also at times shooting pains around the ear and side of the head.

Notwithstanding that the hot air was not well tolerated, because of making this patient dizzy, a few days' use with sufficient heat to vaporize iodoform caused the sinus to close and the discharge to disappear almost entirely. Not only has continued treatment removed the granulations and dried the discharge in the tympanum, but the heated air and iodoform passing through the eustachian tube have markedly improved the nasal conditions.

Case 2.—Miss H., aged 24, of delicate physique, had had chronic nasal discharge for years and occasional foul discharge from the right ear. The right septum was in contact with the turbinal bodies by a sharp angular deflection, and the anterior end of the left inferior turbinal polypoid and both nares were bathed in pus. October 15 the polypoid growth was removed. On the 18th my attention was called to the foul discharge of the right ear, the membrana tympani of which had a small central perforation. The ear was cleansed and a prolonged application made of hot air and nascent iodin, following negative pressure to the nares. The ear was dry and clean on the 20th and has remained so. October 24th both ears heard the watch at 4 feet and ten days later at 15 feet. There have been no nasal symptoms since.

Case 3.—Following the interesting review[3] of the work of Rendu in diphtheria, I had the opportunity in a member of my own family to try the effect of the hot air in clearing up the throat during the prolonged persistence of the positive culture after a mild diphtheria. The only noticeable result was the non-appearance of the various bacilli which usually accompany the staphylococci as the diphtheria bacilli disappear.

Case 4.—L. K., aged 30, who had had nasal diphtheria just two years before, presented himself March 16, with complaint that he had had pain in the right fronto-ethmoidal region for three weeks and the past week a profuse discharge. I aspirated 2 drams of thick yellow pus and made a prolonged application of hot air. The blood-serum culture was almost exclusively a polar-staining bacillus. *One week later at his* next visit the culture showed only staphylococci.

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[1] Wright, Jonathan: Laryngoscope, February, 1913.

[2] Koenig, C. J.: Iodic Fumigation, New York Med. Jour., March 2, 1912; abstr., The Journal A. M. A., March 23, 1912, p. 896.

[3] Hot-Air Treatment for Diphtheria, Current Comments, The Journal A. M. A., Aug. 3, 1912, p. 376. Rendu, R.: Treatment of Diphtheria with Hot Air, Lyon méd., Jan. 12, 1913, abstr., The Journal A. M. A., March 1, 1913, p. 701.

A considerable number of sinus cases have been treated with very satisfactory results. Some patients have apparently been cured on whom the operations done were very conservative and in whom the negative pressure, hot air and iodoform were *manifestly* of the greatest benefit.

Case 5.—Sophie W., aged 22, has been under my care at times for seven years, suffering from chronic *ozena*, suppuration of both antra and left ethmoid, and in 1912 of both ears. In June of that year there was a sharp attack of facial erysipelas beginning on the right at the root of the nose, and crossing and involving the greater part of the left brow and cheek, evidently an infection extending from the nares. There was no evidence of disease at this time of any sinuses except of the left antrum and sphenoid. Both ostia were freely patulous. The use of the air douche and vaporized iodoform directly to the sinus through the catheter brought about the disappearance of the morning crusts, though slight occasional discharge was still present at last accounts.

Case 6.—B., aged 21, has suffered for years from pansinusitis, and Sept. 1, 1912, was having profuse discharge from right antrum, the ostium of which was surrounded by swollen and degenerated tissues. The tissues were removed and the air douche applied directly to the sinus, followed by the hot air and iodoform. A few treatments resulted in the practical disappearance of discharge from both antra. A month later a few treatments with negative pressure and nascent iodin supplemented by a course of autovaccine (*Staphylococcus albus*) brought about a remarkable improvement of the condition of the other sinuses.

Two other patients were apparently greatly benefited by the addition of an autovaccine, the one a *Staphylococcus albus* and the other a polar-staining bacillus.

CONCLUSIONS

Patients complaining of sore throat and earache from acute pharyngitis have been relieved by a single application of the hot air and nascent iodin and have reported the following day that there had been no return of their discomfort. Altogether there is so much advantage and so little of unpleasantness to the patient or inconvenience to the doctor, that these conservative methods of treatment ought to commend themselves to the careful physician.[4]

The results of these hot-air and nascent iodin treatments seem to be specifically the destruction of the less resistant bacteria and the drying and shrinking of the tissues with the secondary increase of cellular activity and removal of inflammatory products which interfere with drainage.

524 Syndicate Building.

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[4] The violet fumes of vaporized iodoform may be used in the ear but are too irritating for the air passages. For the nose and *throat the iodoform heated to a point just short of decomposition* is wholly unirritating, while the Koenig mixture of iodin, camphor and menthol crystals in talcum powder is decidedly irritating.

Creed of Social Hygiene.—The sex problem, the venereal peril and the social evil are questions as much concerned in the future welfare of the race as the intellectual enlightenment of the public schools or the moral precepts heralded from the average pulpit. I am in favor of the prohibition of consanguineous marriages; the presentation of a physician's certificate of normal soundness of mind and freedom from incurable and communicable diseases prior to marriage; the registration of all persons afflicted with any form of venereal disease and of prostitutes; the sterilization by vasectomy or otherwise of all confirmed criminals, moral degenerates and sexual perverts, and the castration of all confirmed rapists. —Clinton E. Spicer, M.D., in North Dakota State Med. Assn.

THE SERUM DIAGNOSIS OF PREGNANCY*

CHARLES C. W. JUDD, B.A., M.D.
Instructor in Clinical Pathology, College of Physicians and Surgeons
BALTIMORE

Though normal pregnancy is usually diagnosed with fair exactitude by the patient herself, the early diagnosis of the condition is often open to many fallacies by the trained obstetrician, while even as the months pass by *some cases remain obscure.* The desirability of an early diagnosis in all cases, and the imperative necessity in some is only too obvious.

To these and other ends many signs and symptoms have been described relative to the probability of pregnancy, but until late in gestation no pathognomonic evidence has been adduced by these means. To satisfy this deficiency, of late years serologic methods have been applied.

The antitrypsin test has been utilized in this connection by Franz and Jarish,[1] E. Rosenthal,[2] Jochmann[3] and others with the fairly uniform result that in pregnancy, beginning practically at the time of implantation, the antitryptic index is materially increased. This test is, however, far from specific and, as one investigator pertinently remarks, if it is possible to exclude carcinoma, exophthalmic goiter, nephritis, the infectious fevers, some gynecologic affections, the puerperal state and recent abortion—then a considerable increase in the antitryptic index speaks for pregnancy.

Fieux and Mauriac,[4] who applied a complement fixation test to the condition, a placental extract of an early therapeutic abortion being used as antigen, claim that this is a very successful means of determining an early pregnancy. Though their work has had confirmation,[5] syphilis must be excluded in all cases and moreover, the method is only applicable to pregnancy before the fourth month of gestation. The technic of any fixation test, and in particular when the necessary antigen is so difficult to procure, can only be done in well equipped laboratories with a large clinical service available.

Since the introduction of the miostagmin reaction by Ascoli[6] this method has also been applied to the diagnosis of pregnancy by Julchiero,[7] while Mosbacher[8] has employed another physicochemical measure, the epiphanin reaction, in the same condition. The unusual technical skill required for the performance of both these tests is a serious drawback to their frequent application, the apparatus is expensive, and the results require further confirmation.

Recently Abderhalden[9] has promulgated the theory that free chorionic villi of an implanted ovum induce in the maternal organism a reaction which produces digesting ferments for placental tissue. He has obtained this proteolytic enzyme from the serum of impregnated females of various species, has placed it in contact with placental tissue of the same species and has been able to detect digestive changes in that tissue. Moreover, the performance of the test is simplicity itself.

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* Delivered before the One Hundred and Fifteenth Annual Meeting of the Medical and Chirurgical Faculty of Maryland, April 23, 1913.

1. Franz and Jarish: Wien. klin. Wchnschr., xxv, No. 39, 1912.
2. Rosenthal: Ztschr. f. klin. Med., Berlin, 1911, lxxii, No. 6.
3. Jochmann: Arch. f. Gynäk., Berlin, 1910, lxxxix, No. 3.
4. Fieux and Mauriac: Ann. de gynéc. et d'obst., February and May, 1912; Jour. de méd. de Bordeaux, March 24, 1912.
5. *Quintella*: Ann. de gynéc. et d'obst., July, 1912, Vaysière and others.
6. Ascoli: München. med. Wchnschr., 1910, lvii, 62.
7. Julchiero: Wien. klin. Wchnschr., 1912, xxv, No. 43.
8. Deutsch. med. Wchnschr., 1911, xxxvii, No. 22.
9. Abderhalden: Schutzfermente des tierischen Organismus, Springer, J., Berlin, 1912; München. med. Wchnschr., 1912, lix, Nos. 24 and 36; Deutsch. med. Wchnschr., 1912, xxxviii, No. 46.

A fresh placenta is obtained, finely ground in a meat-chopper, washed entirely free of blood and then thrown into about a quart of vigorously boiling water to which it is preferable to add a few drops of acetic acid. After five minutes' boiling, the water is drained off and the tissue boiled in a second quart of water for a period of five minutes. This process is repeated as often as is necessary to render the water at the end of five minutes' boiling free from the biuret reaction or a modification of it. Thereafter, the tissue is either drained and thoroughly dried in a desiccator or stored away as a housewife does preserves, except that to further prevent putrefactive changes, a layer of toluene should be added.

The apparatus is meagre, consisting of the following:

1. Dialyzers impermeable to serum albumin and to the intact placental protein but permeable to its cleavage products. Those of Schleicher & Schüll No. 579, are very convenient.
2. Glass containers for the dialyzers, whose inside diameter is not more than 4 mm. greater than the outside diameter of the dialyzers (the ordinary urinometer cylinder serves well).
3. A few capillary pipets, test-tubes and a Bunsen burner.
4. An apparatus for procuring at least 6 c.c. of sterile blood from a vein of the patient.
5. Reagents for doing the biuret test.

The biuret test is performed by adding in a test-tube about an equal volume of a strong caustic soda solution to the fluid tested and layering this mixture with a weak (about 0.25 per cent.) solution of copper sulphate. At the line of juncture, if biuret or allied bodies are present, a violet-purplish ring of demarcation occurs. A more delicate method for the detection of the decomposition products of the placenta is by means of a reagent, triketohydrindenhydrate or ninhydrin. Of a 1 per cent. solution of this 0.2 c.c. are added to 10 c.c. of the test fluid. This is then boiled for one minute. A lavender to deep purplish-blue indicates the presence of the suspected substances, a colorless or slight yellowish tint, its absence.

The performance of a test is likewise simple. The blood is obtained from the patient by venipuncture and allowed to separate or is centrifugalized. The clear, fresh (not over six hours old) and hemoglobin-free serum is pipetted off and 1.5 c.c. of it placed in a dialyzer which has become thoroughly saturated with water. To it is added about 1 gm. of placental tissue. The outside of the dialyzer is then thoroughly rinsed in tap-water. Twenty c.c. of distilled water are placed in the container and the charged dialyzer partially submerged in it. A layer of toluene is added to both dialyzer and container and the whole incubated for from twelve to sixteen hours. As a control, serum alone or serum with tissue (the serum in this case being heated for half an hour at 56 C. [132.8 F.] to destroy any enzyme present), is placed in another dialyzer and incubated as in the other instance. This controls a possible error due to the permeability of substances other than the placental digestion products, which yield a biuret reaction.

At the end of the time of incubation, 10 c.c. of the solution in the container are tested for biuret. If positive, it indicates that the complex placental protein molecule has been broken down to simpler molecules, which, passing through the dialyzer, have imparted to the water on the other side of the membrane—the dialysate—a biuret reaction.

If putrefactive changes can be excludewhich, instead that the tissue was digested by an enzyme ofcket, screws serum, which, so far as investigations have clamped a determine, is present only in the gravid statan opening perium, and in cases of retained membranes. similarly tive test is obtained it is strong if not concling-chair. dence that placental tissue is not or has notive presbeen in the patient's system. Some thirty or more 'cl my own cases tested by this method have been quite in accord with the strict specificity of this test when putrefactive changes, fresh serum, and the proper selection of dialyzers have been carefully controlled.

1902 Eastern Avenue.

THE EXPERIMENTAL PRODUCTION OF PELLAGRA IN THE MONKEY

BY A BERKEFELD FILTRATE DERIVED FROM HUMAN LESIONS—A PRELIMINARY NOTE *

WILLIAM H. HARRIS, M.D.
NEW ORLEANS

The inability to produce satisfactorily pellagra in animals by means of various foodstuffs (spoiled maize and other cereals) which are considered by many observers to be in some manner responsible for the production of the disease, led to investigations based on the hypothesis that pellagra is caused by a living micro-organism and not by a chemical intoxicant. Therefore, it seemed logical that the causal agent would be contained in one or more of the various tissues affected, and by utilizing these the disease could be reproduced in a susceptible animal. It was considered inadvisable to attempt injections of the whole tissue emulsions because of the heavy bacterial flora of the intestinal tract, the contaminations of the skin and the probable secondary infection of the patient dead of pellagra. These considerations together with the view that the disease in man might be due to a filterable virus occasioned the employment of filtrates from the various organs. For this purpose the skin, alimentary tract and more especially the brain and cord, since many of the characteristic symptoms of pellagra indicate disorders of this system, were filtered and utilized for animal injection.

In the spring of 1910 experiments with a Berkefeld filtrate of the infected human tissues were carried out on the monkey. These materials were selected from the fresh necropsy of a case of undoubted pellagra which presented clinically a typical picture of the disease; namely, extensive skin lesions, stomatitis, diarrhea and the various nervous manifestations. The skin lesions involved the hands, face, legs and scrotum, and were sharply defined, being of a distinct black color, dry, elevated and scaly. A complete necropsy was held within two hours after death, and the only lesions found in the gross and microscopically were those present in fatal pellagra; no concomitant disease was present. The tissues of the different parts of the central nervous system, especially the cord, portions of the skin lesions and of the alimentary tract including the nasopharyngeal mucous membrane were removed. These were mixed with equal amounts of normal saline solution, ground together in a mortar and allowed to stand in the ice-chest over night. After coarse filtration the juice was passed through a Berkefeld filter, letter N.

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* From the Laboratories of Pathology and Bacteriology, Tulane University.

primary aim was to infect an animal with the dis- filtrate from the tissue mixture was injected sub- ly, intravenously and intracranially in large quanti- a full-grown, normal male *Macacus rhesus* (Mon- After showing immediate pressure symptoms the recovered from the operation and remained appar- normal for many months, when he developed irregular patches on the face, forearms, hands, back and sides the body. He gradually grew thin and weak and finally died with all the signs of pellagra. The length of time for the development of the disease in this animal occasioned considerable skepticism of the results and the experiment was not repeated until a similar typical fatal human case was again available. The necropsy protocol of this animal is given below.

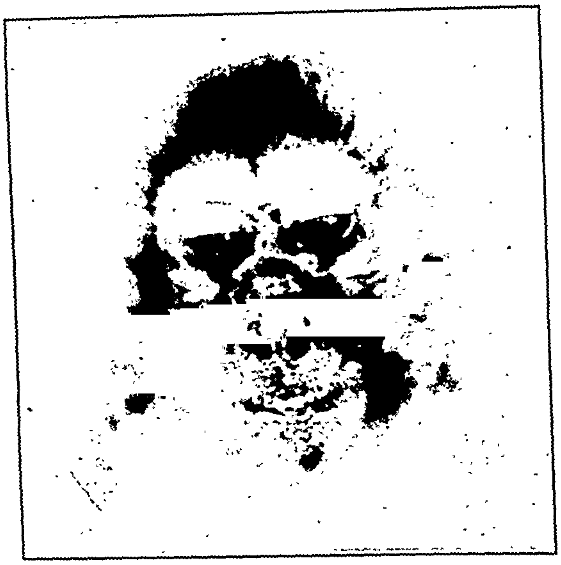

Fig. 1.—Monkey 2, showing lesions of face.

On Dec. 2, 1912, a full-grown healthy *Macacus rhesus* (Monkey 2) was inoculated with large quantities of a filtrate from parts similar to those previously used, which were obtained from a fatal case of recurrent pellagra that showed on post-mortem examination no evidences of other disease. The injections were given intracranially, intravenously and subcutaneously and, aside from some immediate pressure symptoms, the animal remained apparently normal for a period of two months.

Another distinct case of fatal pellagra presented itself in February which revealed at necropsy only the lesions consistent with pellagra. The small intestine showed extensive inflammation of the mucosa. Two separate filtrates for animal inoculation were prepared from the tissues of this subject: one from the brain and cord and another from the intestinal and skin lesions. The nasopharyngeal mucous membrane was not used and only a very small amount of skin. The animal which had previously received injections of pellagra filtrate (Monkey 2) was given a second injection of equal parts of these two filtrates mixed together. Another animal of the rhesus type (Monkey 3) was injected intravenously and intracranially with the filtrate prepared from the brain and cord. These two animals were inoculated on Feb. 12, 1913.

Early in May, Monkey 2, which had received two inoculations, one in December and the other in February, showed irregular patches of a copper or dusky red color about the face. On May 10 these patches were raised, considerably darkened, very dry and more clearly defined, being located across the nose and spreading in wing-like manner on either side under the eye and over the cheek. The shape of the lesion in general was somewhat that of a butterfly. At this time copper-colored lesions had appeared on the summit of the concha of both ears and at the external canthus of the eyes and also over the backs of the hands. There was a distinct symmetry in the bilateral arrangement and shape of these lesions. Subsequently the animal has become melancholic, emaciated and weakened; he sits about the cage (dimensions 8 by 10 by 15 feet) or slowly climbs instead of jumping about as previously. The lesions apparently itch since he scratches them frequently and often is seen picking off the scaly plaques. His appetite is poor. A slight diarrhea has developed and he shows considerable salivation, slobbering freely; the tip of the tongue is granular in appearance and the papillae are considerably enlarged. On May 28 the skin lesions have become almost black in color and are easily visible at a considerable distance; when viewed closely evidences of cracking and scaling are seen. At present date (June 1) the lesions look about the same except that there are deeper pigmented areas within the large plaques, producing a somewhat mosaic appearance. Along the bridge of the nose some of the scaly plaques have fallen off, one of which measures approximately 0.5 cm. The hands over the dorsal surface of the fingers and over the wrists posteriorly now present distinct dry black lesions and show, especially on the fingers, distinct scaling. The hairs over the phalanges have disappeared (see photographs). The animal is growing progressively weaker and thinner and the signs and symptoms are becoming more marked.

Monkey 3 is still in good condition and quite lively but presents about the face a few irregular, rust-colored macules, quite like the early lesions of Monkey 2.

Though the clinical observations on Monkey 1 are not so detailed as desired since the period of incubation was so long that routine examinations had been discontinued, the necropsy findings are of particular interest. The animal is extremely emaciated and presents large irregular pigmented plaques on the face, forearms and back. These are in some areas of a chocolate color while other areas show a gray scaly surface; they vary in size from approximately 2 by 3 by 3.5 cm. to 4 by 6 by 7 cm. and in other places they have merged together to form more extensive patches. The lungs and the heart are normal and aside from some inflammation of the small intestine no other gross lesions are present. Microscopically, the most typical lesion is found in the sections of the skin, which show extensive hyperkeratoses of the

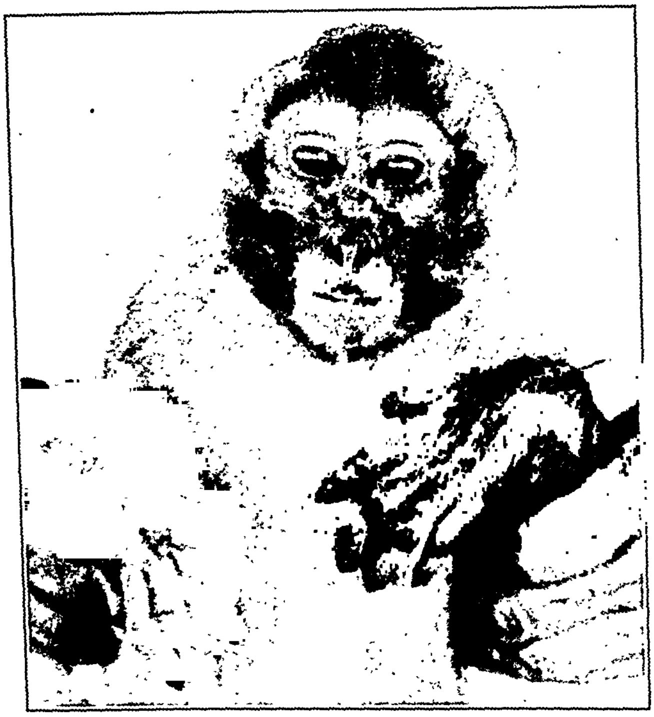

Fig. 2.—Monkey 2, showing lesions of face and hands.

epidermis, marked increase in the depth of the papillae and abundant pigmentation in the deeper portions of the corium where many chromatophores have wandered into the deeper strata. The cutaneous lesions are identical with the microscopic picture of the skin in human pellagra.

These experiments would indicate that pellagra may be transmitted to the monkey (*Macacus rhesus*) by means of a Berkefeld filtrate derived from the tissue of the human subject; at least, the animals develop all the essential clinical signs and symptoms together with the pathologic picture discerned in the disease in man. Furthermore, they suggest that the etiology of pellagra is a filterable virus or a micro-organism capable of passing through the pores of certain Berkefeld filters. The details of this work and the further experiments which have been undertaken with a view of determining the nature of this filtrate and other phases of the problem will appear in a subsequent publication.

For many suggestions during the progress of this work I wish to extend thanks to Prof. C. W. Duval in whose laboratory the work was carried out.

SPECIFIC AND EXTREME HYPERLEUKOCYTOSIS FOLLOWING THE INJECTION OF BACILLUS TYPHOSUS IN IMMUNIZED RABBITS *

FREDERICK P. GAY, M.D.
AND
EDITH J. CLAYPOLE, M.D.
BERKELEY, CAL.

In a previous note[1] dealing with induced variations in the agglutinability of the typhoid bacillus, we have indicated a method for testing the protection of animals that have been immunized by various preparations of the typhoid bacillus. This method consists in employing the typhoid-carrier state in rabbits, which, under proper conditions, may be produced regularly in control animals. This carrier state, which is usually followed by the death of the animal in from five to twenty days, does not occur in animals that have been properly immunized against the typhoid bacillus. In a further study of the mechanism by which the injected bacteria are disposed of in the immunized animal, an apparently unrecognized and significant phenomenon has been observed which further emphasizes the importance of polymorphonuclear leukocytes in disposing of bacteria.

The preeminent importance of leukocytes of the polymorphonuclear type in taking care of bacterial infections has been amply determined by the work of Metchnikoff and his followers. We know that these cells dispose of bacteria either through direct phagocytosis or indirectly following the action of tropic substances in serum on the bacteria. Further evidence that indicates the importance of leukocytes is their response to the injection of any foreign protein substance, particularly to bacteria, by an increase in number (hyperleukocytosis). So far as we are able to determine, no distinct evidence has been brought forward that hyperleukocytosis occurs to any greater extent in specifically immunized than in normal animals.

We find that the injection of living typhoid bacilli, grown on rabbit-blood medium, directly into the circulation of normal rabbits produces first a hypoleukocytosis, which may fall to from one-fourth to one-eighth of the original count, and which is followed by a hyperleukocytosis reaching its maximum in from sixteen to twenty-eight hours. The average maximum in five observations in which the maximum was almost certainly obtained is 46,000 leukocytes to the cubic millimeter (lowest count 34,000; highest count 56,000). This fluctuation is due entirely to variations in polymorphonuclear leukocytes, which disappear almost entirely from the peripheral circulation during the stage of hypoleukocytosis.

In typhoid-immunized animals the response is enormously increased over that obtained in normal animals. The hypoleukocytosis occurs somewhat earlier than in the normal animals (from about one and one-half to three hours), although it does not reach any remarkably lower grade. The count has returned to the normal usually in about six hours, whereas it does not return in the normal animal until about fourteen hours. The maximum in immunized animals, which is also reached earlier than in normal animals, was found to vary from 80,000 to 274,000, with an average in five cases of 138,000. Owing to the fact that observations were not taken at sufficiently frequent intervals, there is no certainty in many of these cases that the crest of the curve of hyperleukocytosis was actually obtained. The figures are, however, perfectly comparable with those obtained in normal animals and show on the average a leukocytosis that is three times as great. It is further to be noted that this response of leukocytes in typhoid-immunized animals is specific for the typhoid bacillus, as such animals are found to respond no better than normal animals to injections of the *Micrococcus aureus*.

It is evident, therefore, from this observation that the activity of polymorphonuclear leukocytes in immunized animals may be not only qualitatively but quantitatively increased. We are engaged in extending these observations to other types of immunity.

2347 Prospect Street—2826 Garber Street.

EPIDEMIC OF TYPHOID DUE TO MILK

WILL SHIMER, M.D.
Superintendent, Bacteriologic Department
AND
WILL McABEE
Drug Chemist, Chemical Department, Laboratory of Hygiene,
Indiana State Board of Health
INDIANAPOLIS

Indiana Harbor, a city of 10,000 people, in Lake County, Indiana, in common with the other cities about the southern end of Lake Michigan, is accustomed to have a rather high death-rate from typhoid during August, September, October and November. During the month of October, 1912, however, the number of cases was unusually high.

November 8, 1912, we visited Indiana Harbor. Thirty-two cases of typhoid had been reported to the town health-officer. Of the patients twelve were men and twenty were women and children. The water-supply for Indiana Harbor is taken from the same source and pumped through the same mains as that for East Chicago. There was not an unusual number of cases of typhoid in East Chicago. This fact, along with the age and sex of the sick, practically eliminated the water as the source of infection. The homes of those sick were in that part of town where the sanitary conditions were of the best. Secondary cases in the same family were infrequent because most of the people employed trained nurses.

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* From the Hearst Laboratory of Pathology and Bacteriology, University of California.

[1] Gay, Frederick P., and Claypole, Edith J.: Induced Variations in the Agglutinability of Bacillus Typhosus, The Journal A. M. A., April 12, 1913, p. 1141.

A careful tabulation of the cases showed that all the patients took milk from a milkman who obtained his supply from four farms 40 miles away.

Investigation of these four farms showed three to be in good condition. On the fourth farm there were suspicious conditions. The family consisted of a dairyman, his wife and nine children. The eldest son, who had been working away from home, returned in the early part of August with what the doctor called "walking typhoid." About August 10 the mother, who had been nursing him, went to bed with "bilious fever." She was able to be out of bed about October 10. At this time her husband began to feel ill. He did not go to bed, but "just took a little brandy every once in a while and kept going." The husband, during his wife's illness, nursed her and did the milking with the help of a 14-year-old boy. The attending physician did not diagnose any of these cases as typhoid; blood taken November 13, however, gave the following results: Mr. X., Jr., suggestive; Mrs. X., positive; Mr. X., Sr., positive.

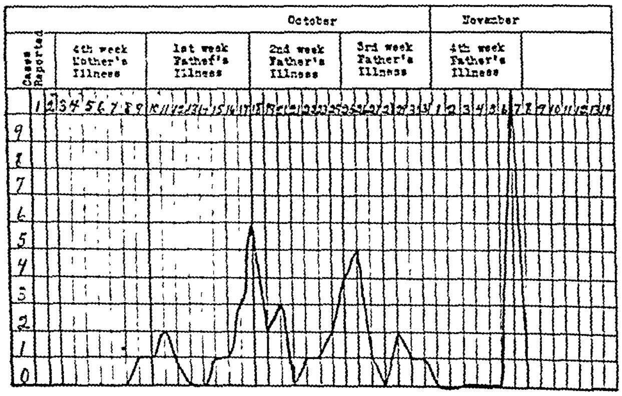

Chart showing approximate date of infection in fifty-four cases reported.

Up to Dec. 1, 1912, fifty-four cases had been reported to the local health officer. The chart shows the approximate date of infection in these cases. The date of infection is obtained by counting back fifteen days from the time each case was reported. Under the present circumstance this time is rather short, we believe. It will be seen from the chart that most of the infections occurred during the illness of Mr. X., Sr., and the last week of the illness of his wife. During the last week she assisted her husband to care for the milk.

After November 10 no milk was sold from this farm that was not thoroughly pesteurized. Only one or two new cases were reported during December and these were, it is more than likely, secondary cases.

The Obligation Resting on the Physician.—It seems to me that every man who has had the opportunity to benefit by a college or university education should feel that he has thereby been put under bonds, as it were. . . . Modern medical education is the most expensive of university, perhaps of any large scale, education. If the [non-medical] undergraduate costs the college twice as much as he pays, the medical student costs probably five times as much, a portion of hospital expense being fairly chargeable to his needs.—F. C. Shattuck, M.D., in *Boston Med. and Surg. Jour.*

OPERATING-TABLE FOR RHINOLOGISTS

Corydon G. Dwight, M.D., Madison, Wis.

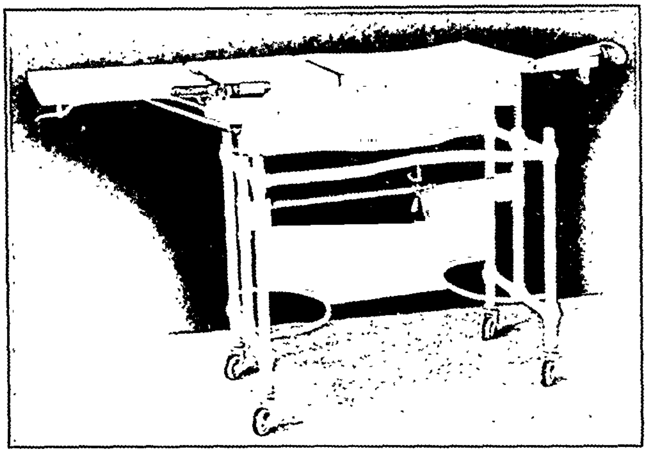

Fig. 1.—Rhinologists' table. Note the hollowing out of the framework and of the back section of the table together with the worm screw arrangement for raising the top of the table above its normal height.

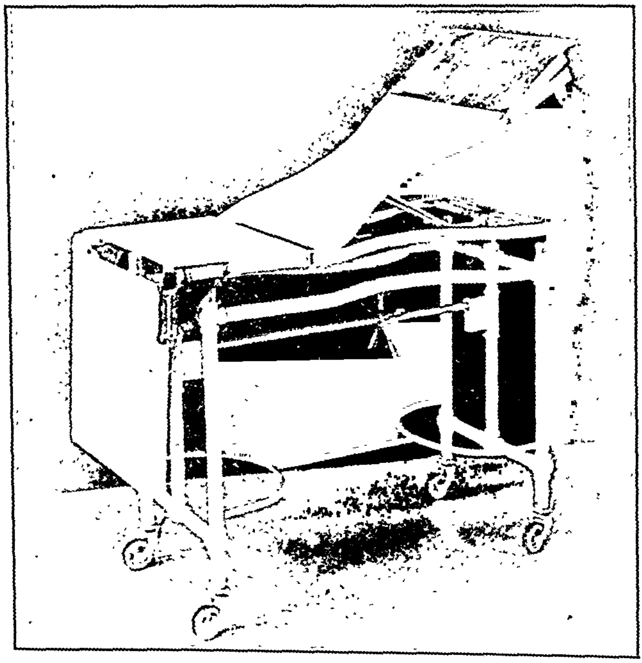

Fig. 2.—Rhinologists' table showing manner of adapting it to the varied positions required in eye, ear, nose and throat work.

I have long felt the need of a surgical table which would be more convenient and adaptable than the ordinary operating-table, which is at best an awkward piece of furniture for eye, ear, nose and throat specialists. Such long and tedious operations as submucous resections of the septum on the ordinary operating-table are very tiresome to the surgeon. He is compelled to stoop and to lean over the edge of a wide table. To overcome this difficulty I have devised the table shown in the illustrations, a description of which is as follows: height 33½ inches, length 70 inches, width of top 20 inches. As will be noted in the illustrations, the framework of the table and the portion of the top coming in contact with the patient's back are hollowed out on each side to permit the surgeon to take a position more directly in front of the field of operation. By means of two worm screws and gears, regulated by a spoked wheel, the top of the table can be quickly elevated 10 inches, thus allowing the surgeon to stand erect while working. The head-rest extends across the entire width of the table and its edge is shaped to fit the back of the patient's neck, giving the greatest degree of comfort. It is raised or lowered quickly by a hand-wheel operating a screw with a sliding nut. When the top of the table is at its normal height, it may be used for eye operations, dressings, etc. The table is mounted on four rubber-tired casters, two of which are equipped with brakes operated by the foot, by means of which the table can be made stationary if desired. The other mechanical features of the table will be apparent from an examination of the illustrations. Its flexibility and its adaptable height make it serviceable in the entire field of eye, ear, nose and throat work.

215 Pioneer Block.

CASE OF URETHRAL CALCULUS, PROSTATIC DIVISION*

D. Lee Hirschler, M.D., San Francisco

Urologic literature contains numerous references to urethral calculi, over one hundred reports being recorded, from many of which important lessons can be learned. The most frequent variety of urethral calculus is that of the single impacted stone, of vesical origin, caught behind one of the physiologic narrowings of the urethra or behind a stricture. In the case here reported it is evident that had the strictured area been kept dilated for some time after the prostatectomy, the calculus would not have formed.

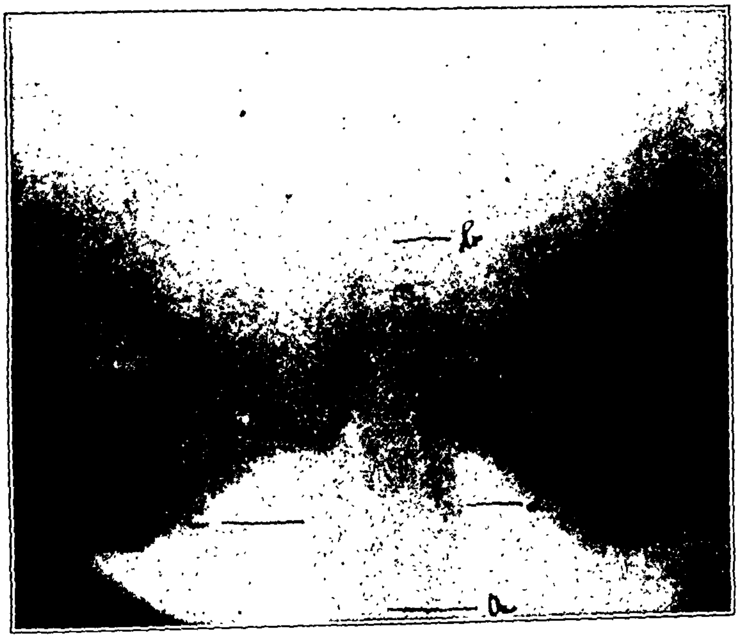

Fig. 1.—Roentgenogram showing calculus in urethra extending from *a* to *b* and from *c* to *d*.

The purpose in reporting this case is to demonstrate a roentgenogram taken of the calculus *in situ*.

Patient.—Charles A., aged 61, single, civil engineer, born in Massachusetts, was admitted Jan. 10, 1913. His father died at advanced age, his mother in childbirth. There was no history of cancer or tuberculosis. The patient denied lues, and had never been ill except as will be described. He was addicted to morphin for five years until "cured" one year ago. Emaciation had been recent and gradual. The patient used tobacco moderately, but never alcohol. Appetite and digestion good; bowels constipated.

External urethrotomy for stricture was performed in 1887, internal urethrotomy for stricture in 1892, and perineal section for "enlarged and diseased prostate" in 1906. Following last operation patient had been discharging half of the urine through perineal fistula. Patient was in good health until one year before admission, when he began to ache in region of perineal fistula. Ache was continuous, not influenced by urine passing through fistula or through penile urethra. Ache increased by sitting posture. Patient also described the "ache" as a "burning pain," and complained of a pain in penis, following course of urethra, griping in character, not influenced by urination and usually ceasing early in the day. The frequency of urination was from half an hour to two hours, day and night, and equal. Urine caused slight burning when passing through penile urethra and at times contained a few shreds of blood.

Examination.—General: Negative except for emaciation. Pulse regular, good volume, much sclerosis. Reflexes normal.

Local: In midline scar in perineum there is a fistula which does not admit any instrument except a very fine probe. Sound passed into penile urethra cannot be made to enter the bladder. By rectum there is a dense, extremely sensitive immovable mass which fills the prostatic region and extends forward to the bulbomembranous juncture. The rectal wall is not adherent to the mass. Both inguinal regions are free of enlarged lymph-nodes.

Urine: Acid; specific gravity 1.017, no albumin, no sugar. Microscopic examination showed numerous pus cells but no casts.

The x-ray plate was placed beneath the buttocks, with the patient flat on his back and the compression diaphragm just above the pubes at an angle of about 30 degrees. In the roentgenogram (Fig. 1) the calculus extends from *a* to *b* and *c* to *d*.

Operation.—Jan. 30, 1913, under general anesthesia, a median perineal incision was made through the scar, and the calculus (Fig. 2) was grasped with forceps and withdrawn, followed by a gush of foul urine. The calculus extended from the bulbomembranous juncture anterior to within the vesical sphincter posterior, the large end (*a*) being anterior (penile). A dense stricture, anterior to site of calculus, was cut and a permanent catheter inserted through the penis into the bladder.

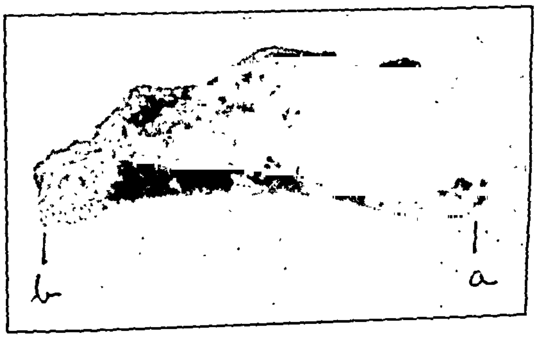

Fig. 2.—Calculus weighing 13.21 gm.

The weight of the calculus was 13.21 gm. Section showed it to consist of a homogeneous mass in layers, without any definite nucleus.

My sincere thanks are due to Dr. W. P. Willard for the privilege of reporting this case, to Dr. H. H. Markel for the roentgenography, and to Dr. A. W. Lee for the photographs of the roentgenogram and calculus.

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* Read before the San Francisco County Medical Society, March 18, 1913.

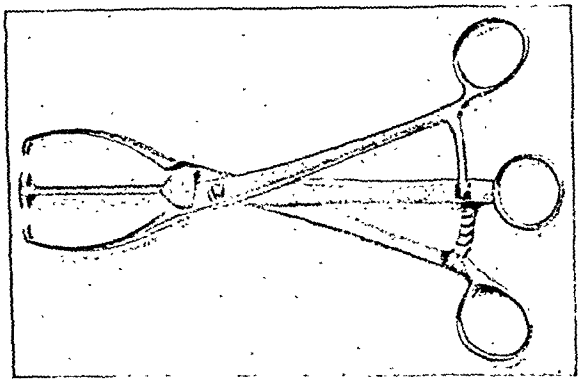
* From the Urologic Service of the University of California San Francisco Hospital.

DOUBLE VULSELLUM CERVIX FORCEPS

Hilbert F. Day, Ph.B., M.D., Boston
Assistant to the Surgeons, Boston Dispensary; Surgical Associate, Maverick Dispensary

It has been my misfortune to have to repair lateral tears of the cervix of the uterus without proper assistance, and it seemed to me that an instrument should be devised which would be of assistance in approximating the edges of such a tear by drawing the lips down at the same tension, thus making it possible to sew them together while keeping their correct relation with each other. Two pair of tenacula are difficult to hold and require an extra pair of hands; therefore, I have designed an instrument for such use. After placing it on the cervix, one set of teeth gripping each lip, it is possible to hold it off to one side, and place the sutures with the other hand. I have found it particularly useful in a few cases where an immediate repair of a small tear in the cervix after delivery is essential.

The instrument itself can easily be understood by reference to the accompanying illustration. It is heavy enough to be strong, but not bulky. It is nine inches in length, and the space between the outside blade and the central shaft, when the instrument is closed, tapers from half an inch to a quarter of an inch. As is shown in the illustration, the three parts of this instrument are held together by screws, and in some ways are similar in mechanism to the various forms of stomach clamps. Each blade has its own rachet allowing the adjustment of one set of teeth at a time into each lip of the cervix.



Double vulsellum forceps, made by the E. H. Mahady Company, Boston.

In practice, I have found it easier to grasp the posterior lip first. and then approximate the anterior lip to it and grasp it in the same way.

657 Boylston Street.

ASCARIS LUMBRICOIDES AS A COMPLICATION OF A SURGICAL OPERATION

MARY D. ALLEN, M.D., HAMADAN, PERSIA

The physician who practices medicine in tropical or semi-tropical countries has constantly to bear in mind the omnipresence of intestinal parasites and especially the *Ascaris lumbricoides.*

In Persia it is almost always a safe assumption that every person, whether child or adult, harbors several if not scores of these parasites. It is in fact a custom among some of the more enlightened of the Persians to take a dose of santonin as a matter of routine every few months. A brief history of a gynecologic case in which these worms played a curious part may perhaps not be without interest to others.

Patient.—A Jewish girl, aged 16, married, was admitted to the hospital Nov. 4, 1912, complaining of abdominal pain. General health had been good up to a few months previously when she had a miscarriage at three months. Since that time she had had fever, pain in the lower abdomen, and throughout the time a marked diarrhea, worse at night, when she would have from seven to eight evacuations. Two or three months before admission I examined the patient, made diagnosis of right pyosalpinx and advised operation, to which she would not consent. She was put on a treatment of hot vaginal douches with an ice-bag to the abdomen. Her condition steadily grew worse. At last the patient and her family, fearing death, consented to the operation.

Physical Examination.—On admission: Temperature 100, pulse 120. Heart and thorax, negative. Abdomen distended and held very rigidly over the lower half. From a point a little above the umbilicus on the right side, sloping down to the middle of Poupart's ligament on the left, could be felt a line of marked resistance with great tenderness on pressure. There was apparently some sort of a mass filling up this portion of the abdomen. There was no discharge or external evidence of infection on vaginal examination. The cervix was small and quite freely movable. There was marked induration behind the uterus and in both fornices. Neither the fundus nor the appendages could be felt. White blood-count 15,400. On account of the history of diarrhea the stools were examined and found full of ascaris eggs. On that account 3 grains of santonin were given before the operation, but up to the time of operation no worms were passed.

Operation.—The abdomen was opened in the mid-line. Peritoneum was found markedly thickened and so firm that it resembled an aponeurosis. As soon as the peritoneum was opened a large quantity of foul-smelling pus escaped. About 2 liters (2 quarts) were evacuated and the abscess cavity explored. The uterus was at the bottom of the cavity, small, and adherent to the intestines. The right tube and ovary were tied up in a mass of adhesions to the right of the cavity. The left tube and ovary were not seen. No attempt was made to free adhesions. The cavity was irrigated with salt solution and the incision closed and drained above. A vaginal drain was not put in as it was feared that too many adhesions would be broken up in an attempt to get behind the uterus.

Postoperative History.—Second Day: Patient doing well, wound draining freely and looking well. Dressings changed.

Third Day: Patient given a water and glycerin enema, which was effectual. Ascaris worms passed with it. Dressings removed from wound and a large ascaris, perhaps 8 inches long, found lying across the wound under the dressings. Wound draining very freely; pus very foul but with no suggestion of a fecal odor.

Fourth Day: Water and glycerin enema again effectual, ten or more worms passing with it. One ascaris again found under the dressings and another in the abscess cavity when one of the drains was pulled out Still no suggestion of fecal odor to the pus.

Fifth Day: One ascaris found under dressings. An occasional sound heard as of gas bubbling through the wound but no fecal material in the pus.

Seventh Day: Two ascaris worms removed from the abscess cavity. Five grains santonin given with Epsom salts; two grains santonin passed through unchanged with stools. No worms with stools. At night a third worm was found in the cavity.

Eighth Day: Wound much cleaner in appearance and beginning to granulate up. No worms.

Ninth Day: Considerable pus but no worms.

Tenth Day: One worm found under dressings. No fecal matter.

Eleventh Day: Pus less.

Twelfth Day: Pus again increased; one small worm found in the incision.

Sixteenth Day: No more worms; still a great deal of drainage; wound slowly filling up.

Twenty-Second Day: Patient's temperature 102; complained of pain in right side of abdomen. No cause for the fever found.

Twenty-Sixth Day: Fever has gradually cleared up; pus, which was more abundant for a few days, has become less.

Twenty-Eighth Day: Patient goes home. Wound still draining profusely and large abscess cavity still present. Family unwilling that she should remain longer.

Four Weeks Later: Patient in same general condition. Since going home developed a cough and had a great deal of diarrhea. Wound not improved. Five grains santonin again given with calomel and castor oil. Patient completely prostrated by the treatment. For about a week, no worms appeared in stools; one appeared in the wound the day after the santonin.

Two Months After Operation: Wound still unhealed. Profuse purulent exudate present; granulation tissue very sluggish. Diarrhea better; cough very troublesome. Patient developing an extremely edematous and painful phlegmasia alba dolens of the left leg.

The patient died about two months after the operation.

Remarks.—At no time was there any evidence of a fecal fistula. There was no fecal odor to the pus nor, in spite of frequent fluid stools, any fecal drainage through the incision. Naturally it would be supposed that the worms made their way into the abscess cavity from some portion of the intestinal tract, but why, if ten worms of the size of most of these made their way through the intestinal wall, had there been no escape of any other intestinal contents? This remains a mystery. The worms were most of them full-sized individuals varying from 5 to 9 inches in length and were all alive at the time of removal.

There seems to have been some relation between the doses of santonin and the appearance of the worms, the majority of them having appeared soon after administration of the drug. It would be interesting to know whether, if the santonin had never been given, the worms would have appeared or not.

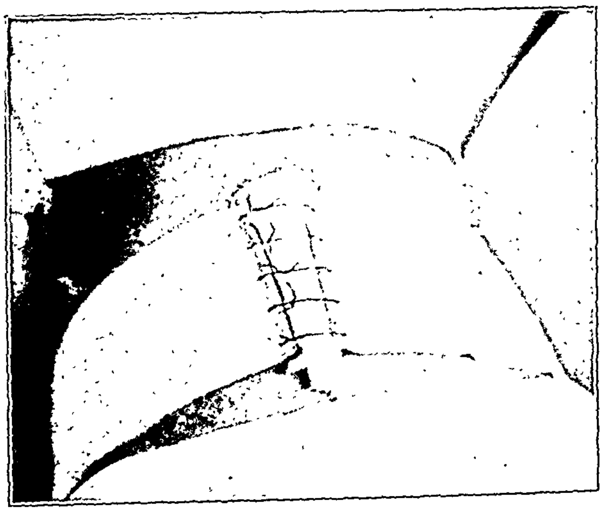
Whether the worms were responsible for the exceeding sluggishness of the wound or whether that was due to other causes is also a question. The pus was always more abundant on the days that the worms appeared and for several days afterward. Unfortunately, in Central Persia, there is no means of access to the literature on the subject, so I am unable to find out whether the case is a unique one or not.

It may be interesting to note, in connection with this case, an instance related by the father of this patient, who is a native physician. He tells of a patient of his whom he had tapped repeatedly for dropsy. On one such occasion, greatly to his surprise, when he inserted the trocar a roundworm came forth. Cases in which worms have been vomited, have appeared at the nose or gone through the eustachian tube into the ear are not uncommon in this country; and cases have been reported in which a worm has perforated the intestinal wall, causing peritonitis.

ADHESIVE SUPPORT FOR TENSION SUTURES

C. L. Heald, M.D., Cedar Rapids, Iowa

When placed under tension sutures are apt to cut their way through the tissues, thus diminishing their support of the wound.



Parallel glass tubes, covered with adhesive plaster, placed over incision to relieve suture tension.

In closing wounds in which there is likely to be much tension, as from tympanites, vomiting or when the patient is to be got up early after operation, I have used the following simple method with satisfaction:

Two pieces of ¼-inch glass tubing are filed and broken off the length of the wound. Two pieces of zinc oxid adhesive plaster are cut as wide as the length of the rods, and as long as necessary to give firm support. One end of each piece of adhesive plaster is rolled once around a glass rod, adhesive surface in, and overlapped on itself ¼ inch.

After the wound has been closed with sutures in the usual way, with silkworm-gut tension sutures inserted but not tied, the adhesives are applied, the rods coming just within the line of tension sutures on each side of the wound. Close to the rods, with knife or scissors, are cut small slits, through which the ends of the sutures are passed, drawn taut, and tied over a strip of gauze laid on the wound. Additional support may be obtained by passing tapes through other slits and around the rods, tying the ends together over the gauze. The usual dressings are then applied.

The sides of the wound are firmly and evenly supported, and the wound is placed at rest, a condition favoring prompt healing with minimum scar formation and liability of hernia.

THE RADICAL CURE OF AN UNUSUAL TYPE OF HEADACHE

T. J. Orbison, M.D., Los Angeles

The following clinical record is presented as an example of a rarely diagnosed disease-form and its cure:

History.—Mrs. L. L., aged 35 years, referred by Dr. William Duffield, Los Angeles, is the fifth in a family of nine children. Her parents are alive and healthy. There is no history of headaches or nervous disease in the family. Up to her seventeenth year the patient was in rugged health. Her menstrual history began at the age of 15, and is the dominant feature of the case. Menstruation has been very irregular. During the last five years it has appeared normally but twice, and not at all in the last thirteen months. Some of her headaches seem to have been due to cerebral hyperemia caused by suppressed menstruation, inasmuch as at every period when menses should show and failed to do so she suffered with terrific hyperemic headache. She was married five years previous to her first examination and has never been pregnant. Apart from her headaches and attendant symptoms the patient does not complain, except that she has had pain at times in the region of the appendix. She complains of terrific, prostrating headaches, and has suffered with them since her seventeenth year. They have been growing worse, and have become so intolerable that she has contemplated suicide.

Onset and Progress.—The headache begins as a sharp, cutting pain in both temporal regions. Thence it moves backward, and seems to go through the brain deeply. It is not noted in the frontal or occipital regions. There is the subjective symptom of excessive pressure from within outward and never the reverse. When it is at its worst she must jump to a sitting or standing posture; she has at times sat up in a chair all night because of it. When she lies down or stoops forward it is made worse. During the headache she vomits often. The duration of severe pain is generally from one afternoon through the night and until about 10 o'clock the next morning. There are no visual phenomena and no aural symptoms, except a dull throbbing. During the throbbing she feels as if there was pressure back of both eyes pushing them forward. The pain is generally one-sided, and is most often on the left. When it is at its height the face is cadaveric and she becomes very anxious. There seem to be two symptom-complexes: (1) intense encephalic hyperemia, especially when the menses are due (vicarious); and, grafted on this (2) migrain.

Examination.—Muscular condition is excellent, though there is evidence of underweight. Heart sounds and blood-pressure do not vary from the normal. There is no abnormality of the bony spine. Pupils are equal and react normally. There is spasm of the orbicularis palpebrarum on the left side. Pelvic examination demonstrates a small, undeveloped uterus but no ovarian disturbance (both ovaries seem normal as to size and position).

The patellar and biceps tendon reflexes are equal and somewhat exaggerated. Painful zones are noted below the left external ear and along the left side of the cervical and upper dorsal vertebrae, and over the trapezius muscle on the left side. There is some tenderness over the region of the appendix. Examination of the eyes (by Dr. Mansur) shows normal fundi, vision and muscle balance. There is no papillo-edema. The urine is normal.

Non-Operative Treatment.—The patient was first seen Aug. 29, 1911. For six weeks she was treated by the application of rest, massage and hydrotherapy, with regulation of occupation and diet. The headaches were treated symptomatically. The result was only fairly palliative, but not a cure. Operative treatment was held in abeyance until there was no doubt as to its indication.

Operation.—Nov. 13, 1911, she was operated on by Dr. William Duffield for the purpose of relieving ovarian dyscrasia, if possible. The ovaries were found normal in size, but rather more dense and tense than normal. A wedge-shaped piece was removed from each ovary, when the parenchyma of both was found to be riddled with small, pearly, cyst-like bodies. The ovaries were then sewed up. The appendix was removed, because of the history of persistent pain, and the abdomen closed. The uterus was found to be very small and hard. The cervix was dilated. The patient was given ovarian extract by mouth.

Results.—From that time to the present (she was last seen April 22, 1913), she has had no headaches except once, when she suffered with ptomain poisoning. The patient says that she is perfectly well and is able to do anything she likes. For some time she has taken no ovarian extract or any other medication. Not the least interesting phase of this case is that the patient has menstruated regularly ever since the operation.

I have presented this case with some hesitation and reluctance, because I am far from advocating surgical interference with the female genital organs except in those patent cases in which the indication is so plain that to disregard it would be unreasonable or obtuse. Aside from the results, the etiology, in this instance, fully justified the course pursued.

Auditorium Building.

Special Article

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS *

(Continued from page 1881)

IX

VACCINES OF SINGLE BACTERIAL SPECIES

For use under circumstances in which autogenous vaccines are not available, or in the occasional cases in which corresponding stock vaccines suffice, making the autogenous vaccine superfluous, it is customary to have on hand a supply of stock vaccines of the more usual species of pathogenic bacteria. These may now be considered one by one, the list including those with a wide vogue irrespective of the scientific claims for therapeutic value. With each vaccine, however, the effort will be made to indicate to what extent there is a reason for its existence. At the same time, under the heads of indications, there will be a brief discussion of the infections or diseases for which the vaccine is recommended, specifying those with real claims and those entirely unreasonable.

STAPHYLOCOCCUS VACCINE

This was the first of Wright's bacterial vaccines for therapeutic use—one of *Staphylococcus pyogenes aureus* used in the treatment of chronic furunculosis.

Preparation.—A pure culture of *S. aureus* recently isolated should be used to furnish the suspension for a stock staphylococcus vaccine. It is the opinion of the most experienced workers that whatever therapeutic potency a stock staphylococcus vaccine possesses can be secured by using *S. aureus*. The "polyvalent" vaccine consisting of a mixture of different staphylococci has not been found superior to that of *S. aureus* alone. Instead of attempting to stock oneself with single vaccines of the various staphylococci (*S. albus, S. flavus, S. citreus*, etc.), or resorting to a polyvalent combination, one who fails to secure a satisfactory response with stock *S. aureus* vaccine should administer a correct dose of freshly prepared vaccine of the autogenous staphylococci.

Indications.—Staphylococcus vaccine is prominent among the comparatively few which by common consent are valuable as stock preparations. A freshly prepared stock vaccine from a recently isolated culture of *S. aureus* seems to be quite as effective in those staphylococcic infections suitable for bacterial inoculation as the autogenous vaccine. In cases in which stock staphylococcus vaccine falls short and the autogenous preparation proves beneficial, it is probable that the successful outcome is due to the latter being fresh, while the former may have deteriorated.

Boils: Wright employed a staphylococcus vaccine first in a case of chronic furunculosis, sycosis and eczema. Singularly enough these three are still the chief ailments in which inoculations of staphylococci prove useful, and the order of probable success is that in which the diseases are named. In other words, a case of chronic boils is the most promising for the therapeutic application of staphylococcus vaccine, if it is not, indeed, the most promising in the whole range of bacterial infections amenable to bacterial therapy. Such a case still offers the most auspicious, and at the same time the least complicated, opportunity for a beginner in vaccine therapy who aspires to master its technic. Still not every case of chronic boils yields to staphylococcic inoculations whether of the stock or the autogenous variety. Mishaps in dosage or inoculation-interval explain some of these unsuccessful results, while others must be placed in the list of cases not suited to vaccine therapy, and explained by Wright as those in which the immunizing mechanism has been exhausted by the repeated failures of auto-inoculation. When this, comparatively the simplest clinical problem in therapeutic immunization, proves insurmountable by the most expert of specialists, no extended argument need be advanced in favor of prudence as regards vaccine therapy in general.

Eczema: Both the subacute and chronic varieties of eczema with serous oozing or pustules yielding *S. aureus* in abundance are often amenable to inoculations of staphylococcus vaccine. Good results are sometimes achieved in the generalized eczema of infancy, and more rarely in that of adults. Localized eczema is less responsive, and in the dry, scaly forms of the type of seborrheic eczema, unsatisfactory results are the rule, with an occasional satisfactory issue as the exception. Bacteria are not the primary cause of eczema, but aggravate an already existing lesion in some cases. When ordinary treatment directed to the underlying condition is of no avail it is well for the physician to remember that in some cases it has been supplemented successfully by the use of vaccines.

Sycosis: That form of "barber's itch" yielding *S. aureus* from the infected hair follicles will at times succumb to inoculations of staphylococci even after obstinate resistance to the usual forms of local treatment. Allied to this affection and sometimes terminating rapidly under appropriate bacterial inoculations is chronic staphylococcic folliculitis, as of the nostrils.

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* This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

Acne: Although chronic acne originally was hailed as a most promising field for vaccine treatment, several years of thorough trial have shown that this treatment in acne is quite as uncertain as other measures. In cases of acne vulgaris with pronounced pustular formation a satisfactory outcome often follows a patient trial of staphylococcus vaccine usually extended over a period of weeks or months. Now and then one witnesses a complete recovery even after a few inoculations in a case of acne of the mixed type which has persistently refused to yield to all the usual therapeutic procedures; but extended experience will disillusionize the practitioner who from such a result anticipates unvarying success in the vaccine treatment of acne. The next case, perhaps, of acne of the face alone, or even localized in certain portions of the face and moderate as to lesions, may prove refractory to all effort. These considerations apply particularly to the use of stock staphylococcus vaccine, for a somewhat larger measure of satisfaction attends the inoculation of fresh autogenous vaccine.

To be convinced that commercial stock vaccines have been disappointing in the treatment, one has only to scan the list of "staphylo-acne" mixtures now on the market, illustrative of the rule that the mixed vaccines indicate a decreasing sale for those of a single bacterial species. Some manufacturers offer to overcome the difficulty by compounding a polyvalent vaccine in which are included staphylococci of the white, lemon-yellow and golden-yellow varieties, and from "many different lesions."

The discovery of various bacilli in comedones and seborrheic secretions, among which is one styled the "acne bacillus" by Sabouraud, has furnished a new impetus to the treatment of acne by bacterial vaccines, and especially to the commercial exploitation of a new line of mixed acne vaccines. As a matter of fact, the bacilli encountered in seborrheic acne are several as to species and variety. Special investigators in the bacteriology of skin diseases are not in accord as to these varieties or as to what if any pathogenic rôle to ascribe to them. Hence it follows that the so-called "acne bacillus" of commercial acne bacillus vaccines is a variable and uncertain quantity as to its identity and biologic properties. Therapeutically, this uncertainty is even more marked, as a fair clinical trial will demonstrate.

A safe working rule for the physician who would attempt the vaccine treatment of acne is to make a cautious trial of a good stock staphylococcus vaccine. If no improvement follows a reasonable trial of this preparation, it is fair to assume that the case is one which will resist all his efforts in vaccine therapy.

Other Localized Staphylococcic Infections: Staphylococcus vaccine is of questionable utility in staphylococcic carbuncle. In any event it should not be used to the exclusion of adequate surgical intervention. The same consideration applies to acute osteomyelitis. Staphylococci may be the exciting agents in a number of other acute, subacute and chronic localized infections, and occasionally of generalized infections like septicemia and pyemia. Here, however, the indication for staphylococcus vaccine (except in the generalized infections in which the expediency of vaccine therapy is doubtful) should rest solely on a preliminary bacteriologic diagnosis; and, of course, it is but a step from such a bacteriologic diagnosis to the preparation and trial of a fresh autogenous vaccine.

Contra-Indications.—In the literature advertising commercial vaccines, staphylococcus vaccine is recommended in impetigo, psoas abscess, suppurating glands, cystitis, "septic infections," otitis media, "mixed infections," mastoid infection, frontal sinus and antrum of Highmore infection, "infections following injury," "abscesses" and pyemia. Any one with sufficient knowledge of bacteriology knows that such a list embraces both localized and general infections of variable etiology with staphylococci as exceptional factors, or if involved, usually secondarily. The list is here reproduced as a warning against the empiric use of stock staphylococcic vaccine in any of the diseases mentioned.

Dosage.—Based on the standard of numerical value the dose of staphylococcus vaccine varies from 50 to 1,000 million. It is rare, even in infants, that a dose less than 50 million will evoke a therapeutic response; but occasion may now and then arise for the employment of doses larger than the average maximum of 1 billion.

STREPTOCOCCUS VACCINE

Compared with that of the staphylococcus, an entirely different situation is presented in the consideration of streptococcus vaccine from the point of view of the stock preparation. The field of usefulness of the stock streptococcus vaccine is strictly limited, and this limitation seems to be directly related to the variations which streptococci from different sources and different morbid conditions present—variations whose underlying cause is still undetermined, but which lead to the appearance of those diverse biologic characteristics by which they are differentiated into the groups, races or strains which subdivide the pathogenic streptococci as a species.

On occasion one may resort to a stock streptococcus vaccine in a given streptococcus infection with what appears to be a specific effect, but the same vaccine tested against another infection likewise due to streptococcus alone will prove quite unavailing. A physician who recognizes this drawback will not experiment, but while waiting for a possible response to the test inoculation of stock vaccine, will take steps to procure and use a vaccine of the autogenous streptococcus, provided the case appears to be one of promise from the point of view of vaccine therapy.

Preparation.—A standard stock streptococcus vaccine should be prepared from a suspension of recently isolated streptococcus of the variety classified as *Streptococcus pyogenes*. Such a strain is usually yielded in streptococcus cellulitis or in abscesses of streptococcic origin. This particular strain appears to possess all the therapeutic virtue possible to any stock vaccine of streptococcus. It usually is more valuable than any polyvalent vaccine of streptococcic races or strains. Perhaps one reason for such superiority lies in the fact that a polyvalent vaccine composed of numerous strains of streptococci can be administered only in the average dose—a dose which may fail to contain a sufficient number of bacteria of the one particular strain which perchance is indicated.

Indications.—Wound Infections: The most auspicious opportunity for the corresponding stock vaccine of streptococcus is in wound infections by this organism with such lesions as cellulitis, lymphangitis, adenitis, tendovaginitis and phlegmon, especially if this vaccine is of the *S. pyogenes* group. A sufficient measure of satisfaction has accrued to the inoculation of such a vaccine to warrant the trial of at least a single dose pending the making of an autogenous vaccine.

(To be continued)

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

PITUITARY LIQUID.—Extractum hypophysis cerebri liquidum, Armour.—Pituitary liquid is a sterile solution containing the active principle of the posterior lobe of the pituitary body of the ox, free from preservatives. Each cubic centimeter represents 0.2 Gm. of the fresh posterior lobe of the pituitary body in physiologic salt solution.

Pituitary liquid is made from the posterior lobe of the pituitary body of the ox by finely mincing the fresh glands and extracting with acidulated water. As the active principle is not destroyed by heat, the liquid is heated to boiling for the purpose of removing coagulable proteids and is then further purified by removing organic impurities such as *peptones* and other proteids. The clear colorless liquid is filled into one cubic centimeter ampoules and sterilized.

Pituitary liquid is a clear, colorless liquid having a *faint* but characteristic odor and slightly salty taste.

Pituitary liquid gives the biuret reaction. Alkaloidal *precipitants* such as phospho-molybdic acid, phospho-tungstic acid, bromine water, etc., all give faint but distinct precipitates of the active principle.

Actions and Uses.—Pituitary liquid stimulates the unstriped muscle, especially affecting the arteries, spleen, uterus and intestinal muscles.

Pituitary liquid is said to be useful in cases requiring stimulation of the heart or raising of the arterial tension, but these effects are of short duration. It is claimed to be diuretic, but this statement has been questioned. It is claimed to be valuable in paralytic distension of the intestines and in postoperative and other pareses as well as in promoting uterine contractions during labor.

This remedy should not be injected during the first stage of labor, because if the os uteri is not fully open the energetic contractions may cause a rupture of the uterus.

Dosage.—1 Cc. (15 minims) repeated in one hour if necessary. Pituitary liquid should be administered intramuscularly in the gluteal region under strict antisepsis in order to secure quick action and prevent necrosis. Pituitary liquid is supplied in one Cc. ampoules only.

Manufactured by Armour and Co., Chicago, Ill. No. U. S. patents or trademarks.

Ampoules Pituitary Liquid.—Each ampoule contains pituitary liquid 1 Cc.

LUMINAL TABLETS.—The following dosage forms of an accepted proprietary article have been accepted for inclusion with New and Nonofficial Remedies:

Luminal Tablets, 1½ grs.—Each tablet contains luminal 0.1 Gm. (1½ grains).

Luminal Tablets, 5 grs.—Each tablet contains luminal 0.3 Gm. (5 grains)

Prepared by E. Merck, Darmstadt, Germany (Merck and Co., New York).

Surgeons Blame Fee-Splitting Practice on Physicians.—"Several of the most prominent surgeons in Indiana," says the *Journal of the Indiana State Medical Association*, "have volunteered the information that they are opposed to fee-splitting because they think it is a pernicious practice, and morally wrong, but that they are forced to divide fees on account of the avarice of the general practitioner who demands compensation for referring his cases. As an evidence of this, specific cases are cited in which general practitioners have written letters in which they state that they have certain cases for operation providing a stipulated percentage will be paid by the surgeon doing the work. One general physician is bold enough to send a form letter to several surgeons asking what commission is paid for cases referred." The *Journal* explains that while the services of the general physician are usually worth what he gets out of the case by dividing the fee with the surgeon, he should charge the patient direct. "The average patient is not only willing, but anxious to pay just compensation for medical services rendered. The family physician will find that he can collect his fee from the patient without the slightest trouble whatever, whenever he earns it, and he earns it whenever he gives the patient good advice and attention in a professional capacity. To collect the fee secretly through a surgeon is an admission of weakness which has no place in the honorable practice of medicine."

Rapid Estimation of Uric Acid.—Dr. J. E. Huber, Peoria, Ill. (*Bulletin of the Peoria City Medical Society*, January, 1913), suggests the following modification of Folin's method of estimating the uric acid in urine:

The following reagents are required:

1. Ammonium-uranium solution:
    Ammonium sulphate, 500
    Uranium acetate, 5
    Water, 650
    10 per cent. acetic acid, 60
2. Saturated ammonium chlorid solution
3. 10 per cent. ammonium sulphate solution
4. 1 per cent. sodium carbonate solution
5. Fiftieth-normal potassium permanganate volumetric solution

The method is as follows: Treat 50 c.c. urine with 12 c.c. of the ammonium uranium solution, allow to stand ten minutes and filter clear. Of this filtered urine concentrate 31 c.c. on a water-bath to about 5 c.c., which should take about half an hour. Wash this 5 c.c. urine into a centrifuge tube, with saturated ammonium chlorid solution, using not quite enough to fill the tube, then stopper with a clean cork and shake thoroughly, and allow to stand from ten to fifteen minutes in cool water. At the end of this time the ammonium urate will have crystallized out; the tube is then placed in the centrifuge and whirled for a minute or two. The deposit will be well packed in the bottom of the tube so that the ammonium chlorid solution can be poured off completely. Fill up the tube with 10 per cent. ammonium sulphate solution and shake up well, so that the precipitate is broken up and distributed through the fluid. Centrifugalize again, pouring off the ammonium sulphate solution, and repeat the process once more. Pour off the ammonium sulphate solution and add about 5 c.c. of 1 per cent. sodium carbonate solution, gradually warming the tube so that everything goes into solution. Transfer this solution to a beaker, washing out the tube with water until about 25 or 30 c.c. total fluid is obtained. Then add 7 c.c. concentrated sulphuric acid and titrate with fiftieth-normal potassium permanganate, titrating to the first diffuse blush of red throughout the whole of the fluid. Each cubic centimeter of potassium permanganate equals 0.0015 gm. uric acid. To the calculated amount of uric acid found, a correction of 1 mg. must be added. The operation need not take more than one hour; the actual work after the evaporation is finished should not consume fifteen minutes.

Emergency Lighting Plant for Ships.—To swell the horrors of a sea disaster at night the lights are apt to be put out by the flooding of the electric generating plant. But is it necessary to depend on a plant located where it is liable to be flooded? Experiments are being made now on a large British vessel that is under construction, with a gasoline electric plant that may be placed on the bridge deck. This set will not only supply the light, but the wireless telegraph apparatus as well, so that the occupants of the vessel may be supplied with light and the means for calling for assistance until the very moment of complete submergence of the vessel. This generating set will be used only in emergencies.—*Scientific American.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JUNE 21, 1913

ORGANIC PHOSPHORUS COMPOUNDS

The organic compounds of phosphorus present little difference in nutritive value so far as the phosphorus is concerned, since they are all decomposed in digestion and absorbed as inorganic phosphates. What differences exist depend on the differing nutritive power of the organic compounds with which they are combined. A well-known physiologic chemist says:[1] "The value of the organic phosphorus compounds in nutrition entirely depends on the nature of the organic matter with which the phosphoric acid is combined." This statement may come as a surprise to many who have heard the supposed virtues of "organic phosphorus" lauded in emphatic terms. We have already pointed out[2] that without question the organic phosphorus compounds can be built up in the animal body from inorganic phosphate. Both organic and inorganic phosphorus compounds can therefore be utilized in the organism; but mere feeding experiments with the organic types do not show in what form their phosphorus is assimilated. Whether or not they are first hydrolyzed and then resynthesized can be determined only by special trials in which the influence of the digestive juices and alimentary conditions on the different organic compounds of phosphorus is ascertained; for whether the intake of phosphorus be organic or inorganic, the end-product excreted in the urine is almost entirely inorganic.

The fact that the phosphorus of the feces is mainly in the inorganic form of phosphate is in itself suggestive of a decomposition in the organism. Dr. Plimmer[1] has, however, subjected the question of the behavior of the more familiar types of organic phosphorus compounds toward the enzymes of the pancreas, intestine and liver, as well as some of plant origin, to the test, so as to obtain a comparative survey of the subject. The organic representatives—glycerophosphoric acid, hexosephosphoric acid, ethylphosphoric acid, phytic acid, nucleic acids, the phosphoprotein casein—were, excepting phytic acid, hydrolyzed by the intestinal mucosa, and their fate in assimilation is like that of the other foodstuffs, all of which are known to be broken down as they pass the intestinal wall and before they enter the circulation. The organic phosphorus compounds, in Plimmer's estimate, are therefore almost certainly assimilated as inorganic phosphate together with the organic radical with which the phosphorus is combined.

There is no evidence that phytic acid—the basis of phytin, which is the calcium magnesium salt of this inositolphosphoric acid—is absorbed as such, despite its refractory behavior toward the alimentary enzymes. For there are phytases in the vegetable foods, so that in herbivora phytin can be hydrolyzed, that is, digested, much as cellulose is by the cytases of plant tissues which enter into the diet. In man and the carnivora bacteria in the large intestine may perform this cleavage function so that in any event phytic acid will enter the circulation as inositol and phosphoric acid. Inositol has, in fact, been found in many tissues. The nutrient virtues or the pharmacologic properties of such phosphorus compounds, if they possess any aside from that of the phosphoric acid radical contained in them, are therefore probably those of the simpler components which they yield in the way here suggested.

THE PROPOSED INTERNATIONAL CATALOGUE OF INCUNABULA

At the meeting of the Medical Library Association, held in Washington, D. C., May 5, Sir William Osler gave an interesting talk on the plan now being carried out in Germany of making a complete catalogue of all the known incunabula in the world, including the medical. The advantages of such a project will be obvious to any one who has had anything to do with these ancient tomes, which, as their designation implies, are the very "cradles" or "swaddling-clothes" of European learning—in effect, the earliest printed books, including, by common agreement, all published up to the year 1500. Many of these books are without title-page, colophon, author, date and place of publication or publisher, and these data can be supplied only by an intensive study, along the lines pursued in any comparative science, of their typography, initial letters, paper, watermarks and other features, in connection with the internal evidence which may be derived from a study of their contents and what is known of their individual histories.

Anyone who looks at the splendid catalogue of "xylographica and books printed with types at Mainz, Strasburg, Bamberg and Cologne" issued by the British Museum in 1908, will realize how much can be supplied by competent scholarship to the life history of a given book. For example, the identity of Adolf Rusch, the "R-printer" of Strasburg, who did the typesetting of the "Liber Aggregationis" or "Aggregator de Medicinis Simplicibus" of Jacopo de Dondis (1298-1359), one of the earliest books to be printed (1470), was established by a good deal of Sherlock Holmes investigation in which the distinguished philologist, Karl Dziatzko, played an important part. We do not yet positively know what is the earliest printed book, and it was only recently that Karl Sudhoff of Leipsic discovered in the Bibliothèque nationale at Paris the first medical publication to be set in type, the Purgation Calendar (*Laxierkalender*), printed by Guttenberg, in the type of his thirty-six-line Bible, in 1457.[1] This is only a single sheet of paper, fragmentary at that, and not a book. Valescus de Taranta's tract on the plague and the Pandects of Matthaeus Silvaticus are also supposed, like the R-printer's book, to have been published about 1470, and there is internal evidence that Roland of Parma's tractate on the treatment of pest may have been printed about 1468; but nothing definite can be asserted until all the known medical incunabula have been properly classified, collated and studied as to their contents and life histories.

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[1] Plimmer, R. H. A.: The Metabolism of Organic Phosphorus Compounds. Their Hydrolysis by the Action of Enzymes, Biochem. Jour., 1913, vii, 43.

[2] The Nutritive Value of Inorganic Phosphates, editorial, The Journal A. M. A., April 20, 1912, p. 1198; Organic and Inorganic Phosphorus Compounds, editorial, The Journal A. M. A., May 25, 1912, p. 1605.

The "Repertorium Bibliographicum" of Ludwig Hain (1826-1828), with the valuable supplements of the learned English barrister, Walter Arthur Copinger (1895-1902), and of Dietrich Reichling (1905-1911) are still the sources of authoritative knowledge in regard to the incunabula, marvelous monuments of learning and industry. Ludwig Choulant (1852-1858) and Karl Sudhoff (1908) have exhausted the possibilities of the graphic incunabula of anatomy, medicine and natural science, Ernst Voulliême, of the Royal Library of Berlin, has catalogued the incunabula in the Berlin collections (1906), Otto Günther the Leipsic and Altenburg incunabula (1909), and Sudhoff has devoted an exhaustive monograph to medical incunabula in the German language (1908). The four-volume "Typenrepertorium" of Konrad Haebler of the Berlin library (1905-1910) is a valuable storehouse of the type-fonts of the fifteenth century books, a detail which is one of the principal clues to their authorship, publisher, probable date and place of publication. Haebler has also catalogued the Spanish incunabula (1904), and Marie Pellechet, now deceased, began a catalogue of the French (1897-1905). In 1910, R. A. Peddie began a numeral check-list of fifteenth century books or "conspectus incunabulorum," which, to date, has progressed no further than the letters A and B.

The proposed catalogue of the Prussian commission, if it can be properly carried out by international cooperation, will probably surpass all other efforts in this kind and will be a standard source of reference for the future. It appears that about 150,000 incunabula have already been catalogued in Germany, and official requests for check-lists from the different libraries of other countries are being sent out by the Prussian commission. American medical libraries, including those of the Surgeon-General's office and the College of Physicians of Philadelphia, will send their quota in due course. What is wanted, at present, is an alphabetical catalogue, by authors, when known, of each library's or person's incunabula, following the lines laid down by Hain and Copinger. These will then be collated with the titles making up the whole collection, and, if it should turn out that a library or an individual has an incunable which cannot be identified or is different from the others, a full description and life history of the book, its style of typography, initial letters and water-marks would probably be requested. For purposes of identification and for establishing trade values, such a catalogue must necessarily appeal to the owners of these rare books in the same way that the printed catalogues of the genuine Stradivarius and Guarnerius violins appeal to collectors of these instruments; and we have no doubt that public libraries and private persons owning incunabula in America will be glad to comply with the request of the Prussian commission (Kommission für den Gesamtkatalog der Wiegendrucke) which has its headquarters at Berlin.

OXALURIA

The enormous literature which exists on the subject of oxaluria is attributable to the fact that the insolubility and characteristic crystalline appearance of the well-known oxalate of calcium make it one of the most conspicuous objects discernible by the microscopic examination of the urine. Every routine inspection of urinary sediment furnishes an opportunity for even the inexpert to have attention called to an easily identified component. Little wonder then that the question of the significance and the origin of oxalic acid in the urine has long been a familiar topic for discussion. As a result the importance of this substance as a cause of pathologic phenomena has been greatly magnified. We believe that it is a tenable conclusion to say that the only conspicuous significance of the oxalates at present is to be found in their tendency to form sediment or concretions. The latter have been known since the days of Wollaston in the eighteenth century. Oxalates may form the nucleus for deposits of urates or phosphates, aside from existing alone without admixtures. They produce the hardest and roughest of stones, which are usually first formed in the pelvis of the kidney so that they frequently cause bleeding.

The therapy of oxaluria, for which the chief call appears to be in connection with threatened formation of oxalate concretions, must aim at a diminution in the excretion of oxalic acid and a greater solvent power of the urine for calcium oxalate. The latter is not easy to bring about with any degree of certainty, and the possibility of decreasing the output of oxalic acid depends on exact knowledge of its precursors and sources in the organism so that they may be controlled and curtailed. This is where the practical difficulties have arisen owing to the confusion that exists on the subject.

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[1] Sudhoff, Karl: Arch. f. Ges. d. Med., 1907-1908, i, 223.

If we attempt, without any guarantee of finality in the matter, to present the current consensus of opinion, it is done with a confession of the difficulties which attend the unraveling of conflicting claims. Three possibilities present themselves. First, oxalic acid may be present preformed in the food and serve as a source of the excreted product. Secondly, it may be produced from certain foodstuffs themselves. To the biochemist this contingency always appeals because of the great ease with which oxalic acid can be obtained in the laboratory from such diverse compounds as sugar, protein, uric acid, etc., by oxidative processes. Thirdly, it may have a purely endogenous origin in reactions occurring within the tissues themselves.

Unquestionably certain foods like rhubarb and spinach contain oxalic acid. Whether this is attacked and destroyed in the organism, or passes through it unoxidized, being thereupon eliminated in the urine, has not been easy to decide owing to the difficulty of ascertaining to what extent ingested oxalic acid or its salts are actually absorbed. There is growing evidence that if they really enter the circulation, little if any destruction occurs. Aside from the excretion of preformed oxalic acid, however, it seems undeniable that this compound can also be manufactured from the familiar foodstuffs. An unexpected source has been described in the excessive gastric fermentation of carbohydrates.[1] The latest investigator in this field[2] concludes that the proteins have no influence on the production of oxalic acid, in contrast with the positive rôle of the carbohydrates and the glycerol complex of the fats. All of our foods contain components which either directly or indirectly contribute to oxalate formation. When, however, the extremely small output attending a large intake of the most varied substances is taken into account, the impression is gained that the capacity of the organism itself to form oxalic acid is at best a limited one.

The part taken by the alimentary tract in relation to the excretion of oxalic acid in the urine unquestionably calls for greater elucidation. The oxalates in foods are present largely in insoluble forms that require some cooperation on the part of the digestive agencies to make them available for absorption. Perhaps the problems of oxaluria need to be studied more extensively from the point of view of the gastro-intestinal situation than has been customary hitherto.

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[1] Baldwin: Jour. Exper. Med., 1900, v, 27.

[2] Wegrzyuowski, L.: Beiträge zur Lehre von der Entstehung der Oxalsäure im tierischen und menschlichen Organismus, Ztschr. f. physiol. Chem., 1913, lxxxiii, 112.

THE ORIGIN OF COMPLEMENT

The substance (or substances) known as complement is of essential importance in the defense of the body against infection and in the processes of parenteral protein digestion in general. It is also an integral factor in the reaction called complement-fixation, now used largely for diagnostic purposes. Naturally the question of the origin of a substance of this kind early attracted notice. Soon after its discovery Metchnikoff took the stand that complement is derived from the leukocytes, being liberated as they undergo disintegration. Since then this explanation has been repeated on various occasions, but as yet we have no really convincing experimental results that point directly to the leukocytes as the source of complement. Indeed, the most recent work fails to establish any definite connection between complement and leukocytes.

Addis[1] and Dick[2] were unable to confirm the result originally obtained by Gengou, that the plasma of the blood is free from complement, nor were they able to demonstrate any increase in complement in the serum when left in contact with the blood-clot and its leukocytes which has been asserted to be the case. Lippmann and Plesch[3] gave thorium X in large enough doses to destroy practically all the leukocytes in the blood of guinea-pigs, but this was not followed by any increase in the complement. It would be reasonable to expect an increase if the leukocytes are the source of complement; these investigators found, furthermore, that complement is regenerated as quickly as in normal animals even when the leukocytes and bone-marrow have been destroyed by thorium X. Dick searched for complement in the various organs by methods suitable for that purpose and also studied the effects of the removal of various organs that can be removed without necessarily killing the animal, but failed to discover any indications as to the place of formation of complement. He then resorted to the use of chloroform and hydrazin sulphate, poisons which cause severe changes in the liver, and he found that there resulted a marked diminution in the amount of complement in the blood. Others have observed that complement is reduced in phosphorus poisoning, in which the liver is also affected.

Here, then, are three substances which cause grave disturbances in the liver especially, and as this is associated in each case with reduction of complement the indications point to the liver as directly or indirectly concerned in its production. And there the matter rests for the present.

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[1] Addis, T.: The Bactericidal and Hemolytic Powers of "Paraffin" Plasma and of Serum, Jour. Infect. Dis., 1912, x, 200.

[2] Dick, George F.: The Origin and Nature of Complement, ibid., 1913, xii, 111.

[3] Lippmann and Plesch: Sind die Leukozyten die Quelle der Komplemente? Ztschr. f. Immunitätsforsch., 1913, xvii, 548.

Public Health against Private Gain.—The food adulterators and the "patent-medicine" fakers are the real foes of the national department of health. They skulk in the background behind vapid legislators who prate of state rights, behind complaisant officials willing to support silly charges against upright administrators, behind honest Christian Scientists misled as to the real purpose of the proposal, behind antivivisectionists and antivaccinationists and all the fanatics they can rally to their support with talk of medical freedom. The medical freedom they seek is freedom to poison, debauch and slay, and their opposition should bring to the support of the movement every decent citizen.—*Pearson's Magazine.*

Current Comment

METABOLISM STUDIES IN PELLAGRA

In a recent number[1] we referred to the dietary studies which have been conducted by the Illinois Pellagra Commission in the attempt to elucidate the baffling problems connected with the incidence of pellagra in some of the institutions of the Middle West. Those studies were confined almost entirely to the question of the adequacy of the dietaries and the possibility of discoverable deficiencies in respect to their general make-up. Under the auspices of the Thompson-McFadden Pellagra Commission of the New York Post-Graduate Medical School and Hospital, Drs. Myers and Fine have attempted to extend our knowledge of the metabolism in this disease by painstaking investigation of a number of pellagrins. These newest studies include a very comprehensive examination of the intake and output of individuals exhibiting the disease in various stages of severity. The detailed results cannot be reproduced here.[2] It appears that anacidity is a symptom in pellagra, and is chiefly associated with an entire absence of pepsin or with the presence of only a diminutive content of this enzyme. These features of gastric insufficiency doubtless serve to account for the marked indicanuria reported in the case of the pellagra patients. The feces exhibited decidedly abnormal amounts of indol and skatol, especially the latter. In the light of these facts it is not impossible, as Myers and Fine suggest, that some unusual bacterial conditions are present in the intestine, although the evidences of excessive putrefactive changes need in no wise be regarded as specific for pellagra, since they are frequently found in other complications associated with the absence of hydrochloric acid from the gastric secretions. Aside from these alimentary bacterial changes, the metabolism experiments on the pellagrins show no unusual inability to utilize the various foodstuffs of the dietary. The elimination of mineral and nitrogenous constituents in the urine is what would be anticipated under the regimen and physical conditions of the individuals concerned. The presence of a few hyaline casts in a number of cases may point to some possible irritation of the kidneys. Small amounts of creatin have also been detected in the urine. Aside from incidental findings of this sort, however, there is little indication of any lowered physiologic efficiency. It is still obvious that other points of attack must be found before the obscurities in respect to the etiology of pellagra shall be entirely dispelled.

THE ASSOCIATION IN SESSION AT MINNEAPOLIS

According to telegraphic despatches received as we go to press, the sixty-fourth annual session of the American Medical Association being held this week in Minneapolis bids fair to be one of the most successful meetings in the history of the Association. Weather at the Twin Cities is warm and clear with occasional showers. The number of physicians registered is large for a northwest point and Minnesota physicians, in particular, are out in force. The anticipated attractions that this meeting would have in being held on the university campus are being realized. The reception which medical men from all parts of the country are receiving is most cordial and the arrangements made for the entertainment of the city's guests are of the pleasantest. The hotels are well filled; many who failed to make their reservations in advance of the meeting are being cared for at chapter houses and in private homes. The visiting physicians are unanimous in their praise of Minneapolis. The House of Delegates met Monday and a report of their meeting appears in this issue, beginning on page 1962. This also includes reports of the Secretary, the Board of Trustees, etc. The opening session of the Association was held at the Auditorium Tuesday morning. The meeting was called to order by President Abraham Jacobi, and before the meeting closed President-Elect John A. Witherspoon was installed as president. Governor A. O. Eberhart welcomed the visiting physicians on behalf of the state, Mayor Wallace G. Nye for the city, President George E. Vincent for the University of Minnesota and President H. H. Kimball for the Hennepin County Medical Association. During the noon hour Tuesday, a complimentary luncheon was served on the university campus, an innovation that seemed to appeal to the visiting physicians. "Public Health Sunday" was a great success; the addresses delivered by physicians in the various churches deservedly received high praise.

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[1] The Nutrition Investigation of the Illinois Pellagra Commission, editorial, THE JOURNAL A. M. A., March 15, 1913, p. 833.

[2] See Myers, V. C., and Fine, M. S.: Metabolism in Pellagra, Am. Jour. Med. Sc., 1913, cxlv, 705.

MICROBIC SYMBIOSIS

The "antagonism" of bacteria, or more precisely the detrimental effect of bacterial products produced by one species on the cells of another species, has been more or less completely studied in a number of instances, but less is known about the favorable or stimulating effect of microbic association. An interesting example of the latter phenomenon has recently been described in a bulletin of the Michigan Agricultural Experiment Station.[1] It is there shown that certain acid-destroying yeasts have the power of maintaining lactic acid bacteria in a condition of activity for long periods when grown with the latter in mixed culture. A "weak" lactic bacillus may be "rejuvenated" by continued association in mixed culture with these yeasts. The filtrate of the yeasts, heated as well as unheated, has a marked stimulating effect both on the vitality and on the acid production of weak lactic bacteria. Northrup is convinced that acid introduced artificially or produced naturally in milk or whey is not merely neutralized but is destroyed by the yeasts. It is not shown that the yeast on its side derives any benefit from the association. This kind of work offers some suggestions for bacteriologists in other fields. It may be asked, for example, if human carriers of diphtheria bacilli or of the streptococcus of septic sore throat may not possibly owe their condition to a symbiotic relation established between the pathogenic microbes and other forms.

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[1] Northrup, Zae: The Influence of Certain Acid-Destroying Yeasts on Lactic Bacteria, Technical Bulletin 15, Michigan Agr. Exp. Sta., 1912.

PROCEEDINGS OF THE MINNEAPOLIS SESSION

MINUTES OF THE SIXTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT MINNEAPOLIS, JUNE 16-20, 1913

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 16

The House of Delegates met in the Engineering Building of the University of Minnesota, and was called to order at 10:10 a. m. by the President, Dr. Abraham Jacobi of New York.

The first thing in order was the report of the Committee on Credentials.

Dr. Morgan Smith, Arkansas, a member of the committee, reported that thirty-nine delegates had been regularly enrolled and were entitled to seats in the House of Delegates, and stated that the Committee would make a supplementary report later.

Before the close of the meeting sixty-six members of the House were reported in attendance.

The President called for the reading of the minutes of the sixty-third annual session.

On motion of Dr. Arthur T. MacCormack, Kentucky, which was duly seconded and carried, the reading of the minutes was dispensed with.

President Jacobi then addressed the House. His address, which follows, was referred to the Reference Committee on Reports of Officers, with the cordial approval of the House of Delegates.

President Jacobi's Address

The President of the American Medical Association is not expected to consider on this platform strictly scientific or technical problems. He must not compete with the sections whose contributions are expected to secure or just miss individual immortality, but I think so much of their value for the work of the American Medical Association that at the very beginning of my remarks I suggest that the sections could make their usefulness greater than ever before if their papers were fewer in number. The sections would not suffer, while the papers would still convey credit to the authors. Not all the papers necessarily benefit the thousands of listeners, and ample discussion may afford more knowledge and enlarge our horizon more than a voluminous paper. Questions announced beforehand for the purpose of eliciting brief papers from whosoever is ready — call them symposiums or what not, or the extemporaneous remarks of men of maturity and wisdom will enlist sympathy and not only draw audiences but also hold them. We write too much and debate too little.

I wonder how the chairmen of our sections feel when their brief term of office has terminated. Their secretaries, however, are men to do the hard work and to be satisfied with small type on circulars and announcements. They should, however, have a different position and office. In Europe the secretaries of academies and learned societies do not change. There Helmholtz and Humboldt and Waldeyer hold their trusts forever. In them are represented the scientific achievements of decades. I suggest such changes in our organization. All our section secretaries should be the prominent scientific men of our profession. From year to year they should be anxious to add to the perfection of the scientific work of their sections and through it attain what will bring to them a solid national reputation. I suggest that the proper committee consider that question with a view at least to a change in the duration of the service of the section secretaries.

The President is justly expected to pay his attention to the physical, educational, economic and moral interests both of the profession at large as represented in our vast organization, and of the nation whom we should be eager to teach and guide. I suggest, however, that his responsibility be not exhausted by attending to our common and individual interests only, but to our duties toward those who are less instructed than we are, or believe we are, and less capable of rendering appropriate services to the millions of fellow citizens all over the country. That is why from time to time the most comprehensive questions of the people's health and welfare are discussed by you or by your officers. Now, the opportunities your President has to address you are few, and thus far, while the honor you have conferred on him and on his predecessors is great enough to satisfy the most ambitious, his influence has been trifling and far from permanent. Maybe I shall be permitted to make a few suggestions in regard to his position and the duties which should be connected with his exalted place. Your Constitution, however, limits him for the present to the performance of a very few duties. Now, while he is in office he should not try to change or suggest a change of his constitutional rights or responsibility. He must not while in office even be suspected of attempting to add to the prerogatives of his position, which was tendered by the kindliness of his peers and which has rarely, if ever, been conquered by undemocratic covetousness and should never in this non-sectarian, unselfish, altruistic profession of ours be the prey of political push and underhanded solicitation.

The honor of my election enforced very little work, but profound silence, in the various councils which your presidents should have the right to attend and in which they should have the right to speak and to labor for you. That should be so in the future. You may not know that your President was obliged to ask for invitations which, indeed, were cordially given, to attend the meetings of your selectmen. This congress of delegates should change that. Your future presidents should automatically occupy a full seat in all your councils except, perhaps, the Board of Trustees. They should be the chairmen in some of them; they should have a veto or deciding vote in case of necessity, and one of their duties must be the obligation, not the right only, to talk to the Association more than at present.

In the Athenian Republic the leaders addressed the whole people, who came to listen and to judge. But unfortunately, even the mass-meeting of the Association is far from being the whole people but only a select and conscientious few. We are altogether 70,000 strong and the absentees amount to more than 90 per cent. of our people. That is why I feel like addressing the absentees mostly through you their representatives. Why are you absent from this one opportunity to meet your more punctual brethren and perform your obligation by proving your citizenship? Neglect is the road to extinction — through permitting the possibility of neglect on the part of those whom you have made your masters, aye, even the alleged conspiracies of whom some of you like to talk about mostly in private, sometimes in the market-place. If there be any cause for that it is your indifference. It is a wonder you have, after all, conscientious hard-working officers whose worth I have had, in my frequent contact with them, many reasons to admire. Your indifference may at least tempt your delegates and other officers to think little of their duties. You make them the aristocracy of our profession, but do not always succeed in making them what they would gladly be — your willing servants, for that is what we are and should be. A predecessor of mine may have had experience like that when he mournfully complained that the activities of the American Medical Association were at a standstill. Was it indifference he complained of? I wish I could look into 10,000 more pairs of eyes of our friends.

Maybe you are pleased to know a little more of what may happen behind the curtains. Many letters received by me during this year express the dissatisfaction of the writers with the methods arranged for the business of the Association. Some want a day set aside — a whole day, for the discussion of its business. They do not remember, however, that the necessity of making ample room for our legitimate scientific work caused the creation of the House of Delegates and the transmission of all scientific work to the sections. It has amply fulfilled the expectations expressed at the time of its foundation. There is no reason, it seems to me, for a change.

The House of Delegates has always great responsibility and much work. Nobody knows that better than you, and mainly those who have had a seat here many years. One of them shares my suggestion, or rather I share his — that your house should convene three days in advance of the official meeting, should not be compelled to hurry its work, should take ample time for consideration and discussion, should not be tempted to rush and run the risk of regretting, and should be ready for the scientific work of the sections with easier minds. My experience in this and other bodies has been that men with scientific minds and altruistic hearts are for the most part those who wish to do all their work, and fulfil all their obligations. As we are situated now, with only one day open for the extensive work of this house, many who would be anxious to serve the Association refrain and decline because they are just as anxious to perform their duties both to others and themselves, in the sections.

The House of Delegates, in the opinion of some, is possessed of more absolute power and autocratic possibilities than the Congress of the United States. It is for you and you alone in your states to select the personalities of your delegates and to outline their responsibilities. If my angry correspondents would pray less and watch more, and would interest themselves in their county and state societies and in the election of their various delegates, they would have less reason to complain of what some of them term the oligarchy of Chicago and the autocracy of the House of Delegates. Both a vast organization like ours and the country at large have exactly the government they deserve. My correspondents will please mind the advice I have given a few of them, namely, to make themselves felt in their county and state and make their influence felt for the good of all. Perhaps it will be opportune, however, to learn that in connection with a few epistles of rebuke and expostulation I found I had to put up with the wiseacres who were members of no societies and even with those who were not yet citizens of the country and without any affiliation except with freedomers. If you had the benefit of an Ellis Island of your own you would have fewer undesirable citizens of the profession, fewer backbiters, fewer calumniators of persons and aims, fewer enemies of the profession, and fewer conspirators.

The President read a communication from the American Institute of Homeopathy.

Reference Committees

The following Reference Committees were appointed:

SECTIONS AND SECTION WORK

Thomas A. Woodruff	Section on Ophthalmology.
William LeMoyne Wills	Section on Surgery
S. W. S. Toms	New York
Rock Sleyster	Wisconsin
Hugh H. Young	Maryland

RULES AND ORDER OF BUSINESS

Theo. B. Appel	Pennsylvania
John O. Polak	New York
Hubert A. Royster	North Carolina
Edgar A. Hines	South Carolina
M N. Voldeng	Iowa

MEDICAL EDUCATION

Henry L. Elsner	New York
H. D. Arnold	Massachusetts
A. C. Cotton	Illinois
V. G. Vecki	California
W. A. Jayne	Colorado

LEGISLATIVE AND POLITICAL ACTION

E. J. Goodwin	Missouri
P. A. Haley	West Virginia
Joseph Y. Porter	Florida
A. R. Mitchell	Nebraska
Thomas S. Cullen	Section on Obstetrics, Gynecology and Abdominal Surgery

HYGIENE AND PUBLIC HEALTH

Oscar Downing	Louisiana
M. P. Ravenel	Section on Preventive Medicine and Public Health
John W. Kerr	U. S. Public Health Service
W. E. Anderson	Virginia
W. S. Lalor	New Jersey

AMENDMENTS TO CONSTITUTION AND BY-LAWS

Floyd M. Crandall	New York
B. R. McClellan	Ohio
Edwin Walker	Indiana
W. W. Richmond	Kentucky
W. B. Russ	Texas

REPORTS OF OFFICERS

Donald Campbell	Montana
Chevalier Jackson	Section on Laryngology, Otology and Rhinology
Thomas McDavitt	Minnesota
Seale Harris	Alabama
M. Howard Fussell	Pennsylvania

CREDENTIALS

D. Chester Brown	Connecticut
E. A. Vander Veer	New York
H. W. Van Allen	Massachusetts
Morgan Smith	Arkansas
J. H. White	Oklahoma

MISCELLANEOUS BUSINESS

C. R. Woodson	Missouri
J. Z. Shedd	New Hampshire
Louis J. Hirschman	Michigan
A. T. McCormack	Kentucky
K. A. J. Mackenzie	Oregon

The Secretary read his report, which was referred to the Reference Committee on Reports of Officers.

Report of the Secretary

To the Members of the House of Delegates of the American Medical Association:

For the year 1912-13 I submit the following report:

MEMBERSHIP

The membership of the American Medical Association on May 1, 1912, was 34,283. During the past year, 303 members have died, 1,179 have resigned, 405 have been dropped as not eligible, 521 have been dropped for non-payment of dues and 13 have been removed from the rolls on account of being reported "not found," making a total of 2,421 names to be deducted from the membership list. There have been added 6,051 names to the membership roll, of which 4,695 were transferred from the subscription list. The membership of the American Medical Association on May 1, 1913, was 37,913, a net increase for the year of 3,630.

As is readily seen, this gain in members is due largely to circularizing subscribers to THE JOURNAL who were eligible, urging them to become members. While it is gratifying to report so large an addition at this meeting, it should be remembered that this increase under normal conditions would have been distributed throughout the years during which the question of postage on Journals mailed to members was unsettled.

MEMBERSHIP OF STATE ASSOCIATIONS

The membership of the various constituent state associations according to the records in the Secretary's office, May 1, 1913, is shown in the table on page 1964.

AD INTERIM COMMITTEE CHANGES

Since the last meeting of the House of Delegates, June 6, 1912, the following changes in the personnel of the committees have been made at the direction of the President:

Committee on Scientific Exhibit—Frederick S. Mandelbaum, New York, resigned from the committee.

The Committee on Memorial to Medical Officers Who Died in the Civil War was reorganized by electing S. Weir Mitchell, Philadelphia, chairman of the committee, vice William C. Gorgas, resigned, from the chairmanship of the committee.

Committee on Clinic Days—James E. Moore, Minneapolis, vice Alexander Lambert, New York, resigned.

Committee to Advise with the British Medical Association—W. W. Grant, Denver, chairman, vice A. T. Bristow, New York, deceased.

STANDING RULES TO GUIDE THE COMMITTEE ON CREDENTIALS

The following correspondence with the Secretary of the Medical Society of the State of New York is submitted to the House of Delegates that it may be referred to the Reference Committee on Rules and Order of Business for its consideration and report, that the House may direct the reply to be made to the Medical Society of the State of New York:

Constituent Association of	No. Counties in State.	No. Component Societies in State Assn.	No. Co.'s in State Not Org'z'd 1912	1913	No. Physicians in State (3d Ed. Directory)	No. of State Members Association 1912	1913	No. A. M. A. Members in State	No. Subscribers to Journal in State.*
Alabama ..	67	67	...	...	2,418	1,646	1,617	370	230
Arizona ...	14	10	6	4	247	128	139	107	53
Arkansas ..	75	65	11	9	2,596	954	994	376	190
California .	58	37	21	21	4,767	2,232	2,445	1,765	811
Colorado ..	62	25	22	25	1,772	846	740	542	230
Connecticut	8	8	...	...	1,564	842	864	483	196
Delaware .	3	3	...	...	246	105	102	52	33
Dist. of Col.	....	....	...	...	1,350	580	587	308	177
Florida ...	48	21	21	27	974	329	353	213	134
Georgia ...	148	73	81	60	3,022	1,408	1,106	416	409
Idaho	27	2	10	15	420	103	95	87	99
Illinois	102	100	2	...	9,988	5,647	5,275	3,678	1,974
Indiana ...	92	86	6	4	4,984	2,146	2,392	1,125	449
Iowa	99	94	2	3	3,653	1,978	1,653	1,150	564
Kansas	105	72	22	23	2,688	1,358	1,370	652	329
Kentucky ..	120	115	5	3	3,601	2,090	2,250	657	243
Louisiana ..	64	41	18	21	1,930	1,002	957	407	284
Maine	16	15	1	1	1,176	606	623	298	97
Maryland ..	24	22	2	2	1,972	1,106	1,081	609	425
Mass.[1]	14	18	...	...	5,648	3,393	3,450	1,898	930
Michigan ..	83	60	3	4	4,104	2,227	2,232	1,158	457
Minnesota .	86	39	5	5	2,262	1,319	1,426	1,056	353
Mississippi .	79	49	9	7	2,009	995	875	254	210
Missouri[2] ..	114	99	18	9	6,037	2,695	2,938	1,571	505
Montana ..	32	14	17	18	512	229	243	150	120
Nebraska ..	92	58	23	25	1,796	937	832	516	264
Nevada	16	5	10	11	144	69	82	58	24
N. Hampsh.	10	10	...	...	704	536	502	221	46
N. Jersey ..	21	21	...	...	2,884	1,443	1,483	858	289
N. Mexico .	26	14	12	11	430	164	175	118	69
New York .	61	57	3	4	14,815	7,088	7,330	4,069	1,517
N. Carolina	100	85	6	10	1,849	1,126	1,115	269	221
N. Dakota .	46	14	5	10	594	388	350	263	77
Ohio	88	88	...	...	7,513	3,328	3,495	1,923	786
Oklahoma .	77	66	12	5	2,620	1,089	1,111	427	230
Oregon	34	11	3	6	1,041	426	393	270	228
Penn.[3]	67	63	4	4	11,345	5,724	6,014	3,194	1,325
Rhode Isl.[1]	5	6	...	...	751	377	370	267	180
S. Carolina	43	38	5	7	1,275	688	712	244	195
S. Dakota .	65	7	8	8	651	272	292	205	125
Tennessee ..	96	61	33	35	3,338	1,373	1,380	499	294
Texas	248	134	85	91	5,888	3,081	3,059	1,014	474
Utah	27	7	21	20	427	228	234	156	76
Vermont ..	14	11	3	3	679	389	387	164	80
Virginia[4] ..	100	....	...	...	2,359	1,488	1,591	470	272
Washington.	39	20	19	19	1,630	819	874	540	310
W. Virginia	55	32	10	12	1,639	941	865	419	157
Wisconsin .	70	53	2	...	2,652	1,726	1,700	1,057	511
Wyoming ..	21	5	9	11	235	118	121	60	51
Canal Zone	....	....	...	...	107	72	86	32	10
Hawaii ...	....	....	...	...	123	79	73	26	10
P. Islands .	....	....	...	...	691	108	105	25	52
Totals ..	2,961	2,001	545	553	138.120	70,021	70,538	36,746	17,375
Honorary members and members listed at foreign addresses								78	.....
Members in government services....................								1,089	.....
Journals to foreign addresses, government services, etc.								.....	2,264
Grand totals....................								37,913	19,639

* Not including members of American Medical Association.

NOTE.—The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1, 1913.

The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement.

Component societies are those societies which compose the state association. A component society may include one county or more.

1. These state associations are divided into district societies, and these are listed in the table as component societies. Some of these districts are smaller and some larger than the county, the county lines being ignored.

2. The state of Missouri has 114 counties and the city of St. Louis.

3. Provision is made for the physicians in each of these counties to join the component society in an adjoining county.

4. Virginia has not adopted the plan of organization. Hence, strictly speaking, it has no component county societies. Members join the state society direct.

NEW YORK, April 3, 1913.

DEAR DOCTOR CRAIG:—

I am returning to you herewith enclosed the certificate form but I have taken the liberty of changing it in some respects to conform to the By-Laws of the American Medical Association.

Our delegates are elected as delegates. Our alternates are also elected. No particular alternate is elected for any particular delegate. In other words, if there is any delegate elected, absent, he may designate any alternate who is present to act for him. You will see that this is in conformity with the By-Laws.

The standing rules of any particular House of Delegates, according to law, has no binding effect on any later House of Delegates thereof, as you doubtless are aware.

It would seem almost an absurdity to urge that because both a delegate and his particular alternate under your certificate plan was absent, therefore that State organization would be deprived of a representative. No statute of any State would sanction any such arbitrary rule.

Our State Society at the last annual meeting elected as delegates Drs. Johnson, Madill, Murray, Phillips and Warbasse. We also elected as alternates for these delegates Drs. Ullman, Neuman, Morton, Jones and Carr. If any delegate is absent, he has a right to designate any alternate to represent him.

Our delegates and alternates elected this year are all elected for two years pursuant to the By-Laws.

In accordance herewith I have simply filled in the names of the delegates elected, and also filled in the names of the alternates elected.

If it is your understanding that there is impropriety in this proceeding, please advise me at once, as I desire to appeal to the Judicial Council.

Please let me hear from you by return mail, as this is a serious matter and must be given instant consideration.

With assurances of regard, I beg to remain,

Cordially yours,

WISNER R. TOWNSEND, Secretary.

P. S.—Please send me a certificate blank so that I may, after the new men are elected, fill them in in the proper manner, as we have always done heretofore.

CHICAGO, April 7, 1913.

Dr. Wisner R. Townsend, Secretary, Medical Society of the State of New York, 17 W. Forty-Third St., New York City.

MY DEAR DOCTOR TOWNSEND:

I thank you for the programs of the annual meeting of the Medical Society of the State of New York and also for the annual reports.

Replying to your letter of the 3d, I am returning the certificate of election which I formerly sent you, together with a blank form. I note your statement that the alternates elected by the Medical Society of the State of New York are not assigned to definite delegates. I would suggest that the Council of your State Society do so designate your alternates in order that the report of your delegates may comply with the standing rules of the House of Delegates of the American Medical Association. These standing rules were adopted by the House of Delegates at the Atlantic City meeting and remain in force until the House rescinds or modifies them. If the Medical Society of the State of New York feels that the rules are not just, it is within its province to protest against the rules and to ask the House to reconsider the action which established the rules. Until some such action is taken, these standing rules are to be considered as being an amplification or explanation of the By-Laws. Your statement, "the standing rules of any particular House of Delegates, according to law, has no binding effect on any later House of Delegates thereof, as you doubtless are aware," is not in accordance with Roberts' Rules of Order which state:

"These are called Standing Rules and can be adopted by a majority vote at any meeting. After they have been adopted, they cannot be modified at the same session except by a reconsideration. At any future session, they can be suspended, modified, or rescinded by a majority vote."

This statement is my authority for stating that a standing rule remains in force until the body which constituted it annuls or modifies the rule. Of course, I shall be glad to present the credentials in any form you desire to have them presented but if you depart from the approved form, the acceptability of the credentials must be passed upon first by the Credentials Committee and later by the House of Delegates before seating the delegation from New York. I doubt whether the Judicial Council has authority in this matter but I will be glad to refer the question to the Judicial Council if that is your wish.

Trusting that you will be able to use the approved form for reporting alternates and delegates, I am

Very truly yours,

ALEXANDER R. CRAIG, Secretary.

NEW YORK, May 22, 1913.

Dear Doctor Craig:

I presume that the blank cards you sent us for delegates are to be filled out by us. We are entitled to eleven delegates, but you only sent us ten cards and one of these was sent to Dr. Warbasse by mistake, as he is not going and we wanted his certificate for his alternate. Therefore, please send me half a dozen of your blanks and we will have them properly signed and given to the delegates and to alternates where delegates cannot go.

I beg to call your attention to the marked copy of THE JOURNAL, which is mailed with this letter. It explains the matter very fully.

Very truly yours,
W. R. TOWNSEND, Secretary.

CHICAGO, May 26, 1913.

Dr. Wisner R. Townsend, Secretary Medical Society of the State of New York.

My Dear Doctor Townsend:

Replying to your letter of the 22d, I regret that we did not send you a supply of cards sufficient for each of the delegates from the Medical Society of the State of New York. I enclose additional cards for your use.

You will kindly note that these cards should be issued to the delegates only. In case a delegate finds that he cannot attend the meeting of the House, he should fill in the form authorizing his alternate to act in his place.

The marked copy of the *New York State Journal of Medicine* has just reached me. Your letter of April 3 and a record of the minutes of the action of the House of Delegates of the Medical Society of the State of New York concerning these standing rules will be presented to the House of Delegates at the coming meeting of the American Medical Association.

Very truly yours,
ALEXANDER R. CRAIG, Secretary.

The following from the *New York State Journal of Medicine*, May, 1913, is the marked passage referred to in Dr. Townsend's letter of May 22:

> In connection with the election of delegates to the American Medical Association, the Secretary stated that the blanks which had been forwarded to the Society to be filled out, signed by the President and Secretary of the State Society, and returned to the Secretary of the American Medical Association, 535 Dearborn Avenue, Chicago, including the certificate of election of delegates, contained the following clause, "Note the standing rules printed on the back of this form." The printed form was as follows:

Chapter III., Sections 1 and 2 of the By-Laws of the American Medical Association and the standing rules adopted by the House of Delegates at the 1912 session for the guidance of the Committee on Credentials are quoted here and the Secretary continues:

> And on the opposite side of the page were the delegates and alternates arbitrarily arranged by the A. M. A. as follows: Delegate, William D. Johnson; Alternate, Walter Lester Carr; Delegate, Grant C. Madill; Alternate, Owen E. Jones; Delegate, Dwight H. Murray; Alternate, Rosalie S. Morton; Delegate, Wendell C. Phillips; Alternate, Leo. H. Neuman; Delegate, James P. Warbasse; Alternate, Julius Ullman.
>
> The attorney for the State Society, Mr. Lewis, was consulted as to the legality of these papers because of the fact that the standing rules adopted at Atlantic City conflicted with the by-laws, which was contrary to Roberts' Rules of Order, which are in force in the A. M. A. The Secretary sent a protest to the A. M. A., but so far has not received any definite reply in the matter, except that Dr. Craig believes the standing rules to be right and proper. The opinion of Mr. Lewis is herewith appended.

April 26, 1913.

Dr. Wisner R. Townsend, Secretary of the Medical Society of the State of New York, 17 West Forty-Third Street, New York City.

MY DEAR DOCTOR SECRETARY:

I have your letter of request for an opinion as to the effect of the American Medical Association's resolutions in regard to the election of delegates which you sent me.

In my opinion these resolutions conflict with the by-laws of the American Medical Association, and the resolution also conflicts with the provisions of Roberts' Rules of Order, which the American Medical Association accepts as its governing authority in parliamentary matters.

The delegates elected at the last annual meeting of the Medical Society of the State of New York were elected pursuant to the by-laws of the American Medical Association, and any resolution passed at the last annual meeting of the American Medical Association would of course have no binding effect upon the delegates already elected. A different question is presented with reference to the delegates to be elected at this annual meeting of the Medical Society of the State of New York.

I am of the opinion that the delegates to be elected at this present meeting of the Medical Society of the State of New York should be elected in conformity with the resolution passed, although it contravenes the by-laws of the American Medical Association, and although in my opinion such a resolution is absolutely illegal. But it is proper for me to add that the delegates from the State of New York should immediately see to it that this resolution is rescinded, because it is likely to interfere with the proper representation from the various states, is in contravention of the Statute Law of the American Medical Association, and violates even Roberts' Rules of Order.

The American Medical Association's by-laws and constitution provide ample means of changing its by-laws, and they should not be changed in such an informal way as by the adoption of a resolution.

To enter into an argument as to the importance of attacking this resolution at the next meeting of the American Medical Association, is unnecessary. The meeting place of the national body in various states makes it imperative that there be no hard and fast rule with reference to delegates and their alternates. Any alternate should be allowed to represent any delegate, otherwise it might often occur that a State would be deprived of representation. The sooner the New York delegates attend to this matter, the better for the interests of the American Medical Association.

Faithfully yours,
JAMES TAYLOR LEWIS.

DR. WENDELL C. PHILLIPS: I think it would be well for the secretary to give us his views regarding this communication from the secretary of the American Medical Association.

THE SECRETARY: I will endeavor in a few words to explain this action, although in some respects it is unexplainable. In the first place, the By-Laws of the American Medical Association give to the different state societies the right to elect delegates to the American Medical Association, provided they had been members for two years of that body, and stated that the delegates and alternates should be elected for two years. We have complied strictly with the By-Laws. The Committee on Credentials at the last meeting of the American Medical Association, held in Atlantic City, had some trouble with delegates from Illinois, one man having no less than three alternates with certificates, all duly signed and vouched for. These vouchers were presented to the Committee on Credentials and it put them in a very embarrassing position, and to prevent a repetition of such a state of affairs a resolution was then introduced in the House of Delegates on the last day formulating these new rules which will prevent delegates in the future from designating their alternates. Now, they come to us and arbitrarily assign certain alternates to certain delegates. This arrangement the Secretary of the American Medical Association justifies by these rules, which in my opinion is no justification whatever, because if the rules are invalid and illegal, they are not binding. Any law is a law, however, until it is repealed or declared unconstitutional by some higher authority, and the Medical Society of the State of New York not being a higher authority can only make a protest. The American Medical Association through its House of Delegates, can repeal these Rules, and we shall have to obey them until they are repealed. In the meanwhile we will have to designate each individual as the alternate for a particular member. In the place of Dr. Carr, we will have to elect some one for alternate of Dr. Johnson, of Batavia, until these rules are set aside.

In electing delegates I would like to make the suggestion that the delegate receiving the highest number of votes shall be No. 1, and so on down to the last delegate; that the House then proceed to elect the alternates, and the alternate receiving the highest number of votes shall be declared the alternate for the delegate No. 1 and so on. This will simplify the election.

DR. PHILLIPS: I move we adopt the suggestion of the secretary. Motion seconded and carried.

THE PUBLIC HEALTH SERVICE

By an act of Congress, approved Aug. 14, 1912, the name of the Public Health and Marine Hospital Service was changed to the Public Health Service. Consequently, the House of Delegates should direct that wherever in the Constitution and By-Laws of the Association the name of this service appears, it be changed to the new title.

PETITION TO CREATE A SECTION

I present a petition to create a Section on Gastro-Enterology and Proctology, in the form of several applications which have been received at the office of the Secretary.

MEDICAL ASSOCIATION OF PORTO RICO

I have the honor to submit a petition from the Medical Association of Porto Rico addressed to the House of Delegates of the American Medical Association praying that the Medical Association of Porto Rico be accepted as a constituent branch of the American Medical Association.

Respectfully submitted,
ALEXANDER R. CRAIG.

Dr. W. W. Grant, Colorado, Chairman, presented the report of the Board of Trustees, which was referred to the Reference Committee on Reports of Officers.

The report is as follows:

Report of the Board of Trustees

To the Members of the House of Delegates of the American Medical Association:

Gentlemen:—It is with feelings of deep regret and sadness that we record in our report to-day the death of our colleague, Dr. C. A. Daugherty, which occurred at his home in South Bend, Ind., on April 23. Last June he was elected for the second time a member of the Board of Trustees. In his four years' service he won the regard and loving esteem of all members by his conscientious, faithful devotion to duty and to every measure contributing to the honor and the progress of the Association. His gentle, kindly nature and ethical bearing endeared him to all, and the Association and the profession mourn the loss of one who deserved the confidence and esteem accorded him by his professional brethren.

It is a pleasure to report favorable and, in the main, very satisfactory progress in Association work during the past year.

The establishment of a surgical journal is still under consideration by a committee of the Board of Trustees.

The Council on Health and Public Instruction is doing an educational work of the greatest interest and importance in public health matters. Its cooperation with, and use of, clubs and non-medical organizations in creating a public interest and demand for medical lectures and information on public health matters is worthy of the commendation and endorsement of the profession.

The Committee on Medical Education continues its active labors in behalf of fewer and better schools, better standards of admission, more scientific instruction and a higher class of men for the practice of medicine and surgery. More detailed and complete information will be embodied in the special reports of these committees.

SECTION PAPERS

In the Trustees' report last year your attention was called to our action relative to the length of section papers in THE JOURNAL. It was stated that the Board had passed a resolution limiting papers read before the sections to four pages of THE JOURNAL, and the discussions by each speaker to five hundred words, unless otherwise ordered by the Publication Committee of the Board. This action was taken on account of the large number of papers sent to THE JOURNAL immediately after the annual meeting of the Association.

The conditions during the past year, however, have been aggravated by the increased number of sections. As will be remembered, in 1910, the Section on Genito-Urinary Diseases, and in 1911, the Section on Hospitals were created. The former did not hold a meeting at Los Angeles, so that last year, 1912, two new sections took part in the scientific work. This, together with the fact that all the sections seemed to be increasing the number of papers, made conditions worse than in any previous year. For instance, in 1908 there were 294 papers read before the sections; in 1909, 290; in 1910, 315; in 1911, 251; and last year, 411. Thus in 1912 there were nearly 100 in excess of those read at St. Louis in 1910, and 160 more than were presented at Los Angeles in 1911.

Last year you created another section—that on Orthopedic Surgery This will still further increase the number of papers to be published.

The Board feels that you should be acquainted with these conditions, that you may realize its meaning so far as THE JOURNAL is concerned. This large number of papers makes it impossible to complete their publication within a reasonable length of time. This is a serious disadvantage both to THE JOURNAL and to the authors of papers. After four or five months, some papers are stale and the reader does not feel that he is getting up-to-date matter; especially is this true when he sees by the footnote that the article was read four, five or six, and possibly seven or eight months before. The author, too, becomes dissatisfied and impatient at the delay. But there is a more important point, and that is the fact that in the endeavor to crowd section papers through, little space is left in THE JOURNAL for voluntary articles. This is a serious handicap because THE JOURNAL is compelled to reject excellent, practical, timely papers; and more especially because the hackneyed phrase "returned on account of lack of space" impresses some with the idea that there is never any space for them, and they occasionally take offense. Thus many excellent men hesitate to submit a second paper when one has been returned. Of course, it is realized that on the success of THE JOURNAL depends the possibility of continuing much of the excellent work the Association is doing, especially so far as finances are concerned. Therefore the Board suggests that the House of Delegates give the subject serious consideration before it establishes more sections.

In considering this matter it should not be overlooked that the problem of publication of the papers in THE JOURNAL is not the only point of view from which to consider a possible increase in the number of sections. Aside from the fact that the larger the number of sections the more papers, the House of Delegates is reminded that even when there were only twelve sections there was often difficulty in providing suitable accommodations for the meetings. With the additional three sections recently created it will be still more difficult in some cities to secure the necessary meeting-places. Further, the danger of making the section work top-heavy, the unnecessary subdivision of specialties, and the duplication of subjects by two or more sections, are only some of the phases of this matter that are worthy of your attention.

LIMITING NUMBER OF PAPERS TO THIRTY

The Board adopted a resolution at its February meeting, recommending that the number of papers to be read in any one section, at the annual meeting, shall not exceed thirty. It is the general opinion of those who have given the matter thoughtful consideration that most medical societies—the sections included—are handicapped in having too many papers, and not giving sufficient time for discussions. Some of the sections, from experience, appreciated this fact, and, on their own volition, have limited the number of papers much below that authorized in the by-laws.

The Board recommends that "thirty" be substituted for the word "forty" in Section 12, Article XI, of the By-Laws.

ENDORSEMENT OF PAPERS BY CHAIRMAN OF SECTION

Section 5, Chapter XI, of the By-Laws is not sufficiently definite as to the composition of the Executive Committee that shall examine and pass on the section papers. The Board recommends that this by-law be amended so as to make it definite, and that the retiring chairman—that is, the one who presides during the session—should be one to pass on and approve, or disapprove, the publication of the papers read. The Board therefore suggests that you consider the advisability of modifying the last sentence by inserting in parenthesis, after the word "committee" in the last sentence—"as constituted at the close of the annual session," and changing "The" to "This." The sentence would then read: "This committee (as constituted at the close of the annual session) shall examine and pass on all papers read before the section, and shall endorse for publication only those that are of scientific or of practical value, and which will reflect credit on the section before which they were read."

CHANGING SECTION SECRETARY EACH YEAR INADVISABLE

The Board feels that some of the sections are handicapped because of changing the executive officer—the secretary—every year. Those most interested and familiar with the subject are of the opinion that this is a mistake. An investigation of the matter will reveal the fact that in practically all successful medical societies—as well as in other organizations—the secretaryship is a more or less permanent office. The Board recommends that the House of Delegates take some action, either in the form of resolutions or otherwise, urging the sections to consider the advisability of making the secretaryship a more permanent office than it is now. The Board believes that this recommendation is of vital importance.

(Minutes continued on page 1989)

Medical News

CALIFORNIA

Personal.—Dr. and Mrs. Joseph Kurtz, Los Angeles, have started for Berlin.——Dr. L. Olivieri, Stockton, has returned after a trip to Italy.——Dr. R. Bremner Smith, San Francisco, against whom insanity proceedings were started three weeks ago, has been declared sane and discharged from custody.——Dr. William Henry Newell, San Francisco, is said to have been declared insane and committed to the Napa State Hospital.

Summer Home for Tuberculous Children.—A summer home has been established near Elmhurst by the Board of Women Managers of the Children's Hospital, San Francisco, for the eighteen patients in the Children's Hospital suffering from tuberculosis. The summer home has been given to the hospital by Mrs. Tay Danforth. There are, at present, three tent houses on the grounds to be used for sleeping quarters and one tent house for a treatment-room.

COLORADO

New Officers.—Denver Physicians' and Surgeons' Club: president, Dr. H. C. Brown; secretary, Dr. C. E. Cooper (reelected).

Personal.—Dr. G. F. Wentch, Montrose, fractured two ribs and a clavicle and sustained internal injuries in a recent runaway accident.——Dr. J. M. Perkins, Denver, has been elected commissioner of social welfare. His duties include the charge of the city and county hospitals and of the local bureau of health.

DELAWARE

Sanatorium Dedicated.—The new administration building of the Hope Farm Tuberculosis Sanatorium was dedicated May 10. The building has cost $90,000. After the dedication exercises, the guests inspected the building.

State Hospital Trustees Reorganize.—The annual meeting of the trustees for the State Hospital for the Insane, Farnhurst, was held June 5. Dr. E. R. Steele, Dover, took his seat as trustee and Dr. J. H. Wilson, Dover, was reelected secretary.

DISTRICT OF COLUMBIA

Personal.—Dr. F. M. Barnes, Jr., has resigned as clinical director of the Government Hospital for the Insane, Washington.——Dr. William Henry Syme, who underwent abdominal section recently at the Emergency Hospital, is reported to be convalescent.

Emergency Hospital Fund Assured.—During the first half of the twelve days' campaign for raising $300,000 for the erection of the new Emergency Hospital in Washington, $73,384.05 was obtained. Permission has been given by the President to solicit subscriptions from employees in governmental departments.

FLORIDA

Hospital Closes for Summer.—Dr. Bohannon's Hospital and Sanitarium, Daytona, will be closed during the summer.

New State Board.—The newly appointed State Board of Health met in Jacksonville, June 10, and organized by electing F. J. Fearnside, Palatka, president. Dr. J. Y. Porter, Key West, was reelected secretary and state health officer and Dr. Hiram Byrd, Jacksonville, was reelected assistant. The new board consists of G. G. Memminger, Lakeland; F. J. Fearnside, Palatka and Dr. S. R. Mallory Kennedy, Pensacola. The state health officer was directed to secure and appoint reputable graduate physicians in Jacksonville, Pensacola, Tampa and Key West to be known as and to be assistant state health officers in their respective districts.

GEORGIA

Commencement.—The Medical College of Georgia, Augusta, at its annual commencement, graduated a class of thirty-four. In addition to the commencement exercises, alumni clinics were held, conducted by the members of the faculty.

Examiners Hold Election.—At the annual meeting of the Board of Medical Examiners for Georgia, Dr. J. W. Palmer, Albany, was elected president and Dr. N. Peterson, Tifton, vice-president. Dr. C. T. Nolan, Marietta, was relected secretary.

Personal.—Dr. L. C. Furr was shot in the abdomen during an affray near Crandall, recently.——Dr. A. P. Kemp, Macon, is ill with malaria in the Macon Hospital.——Dr. J. M. Crawford, Atlanta, has decided to remain in Vienna for eight months taking special courses.

Merger of Atlanta Colleges.—Authentic word has been received that the Atlanta College of Physicians and Surgeons and the Atlanta School of Medicine have been merged and will adopt the name of the Atlanta Medical College, a name held by one of the predecessors of the Atlanta College of Physicians and Surgeons.

ILLINOIS

Sanatorium Opened.—The Springfield Open Air Colony was opened under the auspices of the Springfield Tuberculosis Association, last week. The colony is located west of Springfield and is under the personal direction and ownership of Dr. George T. Palmer.

Resolutions Regarding Dr. Egan.—The State Board of Health at a special meeting held in Chicago, June 2, adopted resolutions setting forth that in the death of Dr. James A. Egan, the state has lost its foremost advocate of disease prevention, of sanitary education and legislation, of higher medical education, of interstate reciprocity in medical practice; eulogizing the vigilant zeal of Dr. Egan in the elimination of epidemics, his labor in making life more secure and his work in striving to place medical education, science and practice on a more exalted plane, and mourning the loss of an untiring fellow-worker and a much loved comrade and friend.

Chicago

Alumni Meeting.—At the annual meeting of the Rush Medical College Alumni Association held June 11, the following officers were elected: president, Dr. Arthur M. Corwin; vice-presidents, Drs. Joseph Z. Bergeron, John J. Stoll and Libni B. Hayman; necrologist, Dr. John Ritter; secretary, Dr. Charles A. Parker; treasurer, Dr. Morris L. Fishbein; chairman of editorial board, Dr. B. McPherson Linnell; chairman of fellowship committee, Dr. George H. Weaver.

Ice Commission Formed.—A recent ruling of the United States Public Health Service has been made demanding that all interstate carriers supply certified water and ice to be used in public drinking fountains, tanks, etc. Under this ruling the various ice and water companies are compelled to obtain certification of their ice and water to be used on steamboats and trains. Accordingly a commission, to be known as the Chicago Ice Commission, has been formed, composed of Drs. Ludwig Hektoen, director of the Memorial Institute for Infectious Diseases, Edwin O. Jordan, professor of bacteriology, University of Chicago, and Prof. John H. Long, professor of physiologic chemistry, Northwestern University, which will undertake the examination of ice, its source, transportation, delivery, etc., and certify the results when found satisfactory.

INDIANA

Hospital Reopened.—The city hospital, Peru, which was built in 1910 and closed for lack of funds, has been reopened through the efforts of a committee of women who expect to raise $5,000 for its maintenance.

New Officers.—Fourth Councilor District Medical Association at Columbus, May 29: president, Dr. William E. Thomas, Clarksburg; secretary, Dr. F. C. Denny, Madison. The next meeting will be held in Madison.——Ninth Councilor District Medical Society at Lafayette, May 15: president, Dr. W. R. Moffitt, West Lafayette; secretary-treasurer, Dr. Fred A. Dennis, Crawfordsville.

Personal.—Dr. W. A. Geckler, superintendent of the State Tuberculosis Sanatorium, Rockville, has sailed for Marburg, Germany.——Dr. M. J. Spencer has been elected president, and Dr. T. Victor Keene, vice-president of the Indianapolis Board of Health.——Dr. G. A. Whitledge, Anderson, has been appointed a member of the Indiana State Board of Registration and Examination in Optometry.——Dr. Oliver P. Graham, Jeffersonville, is reported to be critically ill with pleural pneumonia at Battle Creek, Mich.——Dr. Frank J. McMichael, Gary, is reported to be seriously ill in the Gary Hospital.——Dr. Henry C. Rogers, Rockville, has been exonerated of charges of criminal practice, the sheriff of the county stating that "there was at no time the least evidence to sustain the charge."

IOWA

Tuberculosis Hospital for Blackhawk County.—Plans have been prepared for the county tuberculosis sanatorium for Blackhawk County to be erected on the tract on which the detention hospital is being built. The new hospital will be provided with open wards.

New Officers.—Northeastern Iowa Medical Society at Cresco, June 5: president, Dr. George Kessel; secretary-treasurer, Dr. W. C. Hess, both of Cresco.——Des Moines Valley Medical Association, forty-second annual meeting at Ottumwa, June 5: president, Dr. Frank M. Fuller, Keokuk; secretary-treasurer, Dr. F. W. Bowles, Ottumwa (reelected).—Lynn County Medical Society at Cedar Rapids, June 4: president, Dr. R. B. Hasner, Cedar Rapids; secretary, Dr. Frank S. Skinner, Marion.——Dayton County Medical Society reorganized at McGregor, June 9: president, Dr. H. H. Clark, McGregor; secretary-treasurer, Dr. J. D. Brownson, Monona.——Marshall County Health Association at Marshalltown, May 14: president, Dr. Pauline Myers Townsend-Hanson.

Personal.—Dr. P. O. Convery, Waterloo, is reported to be seriously ill at a sanatorium in Des Moines.——Dr. G. P. Reed, Davis City, has returned from Vienna.——Dr. Paul W. Van Meter, city physician at Atkins, is to spend the coming year in China as a medical missionary of the Presbyterian Board.——Dr. Albert R. Wilsey, Keokuk, charged with manslaughter the result of criminal negligence after an abdominal section, has been found not guilty.——Drs. D. Macrae, C. A. Hill, A. P. Hanchett, F. W. Dean and F. Earl Bellinger have been selected as the public health committee of the Commercial Club, Council Bluffs.——Dr. G. H. Sumner, Des Moines, has been reelected secretary of the State Board of Health.——Dr. and Mrs. R. O. Early, Buxton, have started for Europe.——Dr. John Charles Ryan, Des Moines, on May 23, was found not guilty of operating his automobile in a careless and imprudent manner.

KANSAS

Colleges Merge.—Authentic information has been received stating that at the close of the present session the Kansas Medical College, Medical Department of Washburn College, will be merged into the University of Kansas School of Medicine.

Personal.—Dr. Fred A. Forney has succeeded Dr. J. E. Foltz as superintendent at the State Industrial Reformatory, Hutchinson.——Dr. J. A. DeMoss, Thayer, was seriously injured in a collision between his automobile and a railway motor car, May 14.——Dr. James Faulkner, Lansing, has succeeded Dr. S. L. Axford, Lansing, as physician to the State Prison, Leavenworth.——Dr. S. L. Axford, formerly prison physician at Leavenworth, has been appointed superintendent and physician-in-charge of the Evergreen Place Sanitarium and Hospital, Leavenworth.

MARYLAND

Physician Exonerated.—In the case of Boyd Buey versus Dr. William F. Twigg, Cumberland, for damage for alleged malpractice in the matter of a fracture of the arm at the wrist, the attorneys for the plaintiff nolle prossed the case at Hagerstown, June 5.

Gift to State Tuberculosis Association.—The Maryland Jockey Club has given $10,000 to the State Association for the Relief and Prevention of Tuberculosis and has promised to make a similar gift annually, hereafter. Dr. H. Warren Buckler and Gordon Wilson, both of Baltimore, are named as commissioners for the disbursement of the fund which is to be used for the employment of visiting nurses of Baltimore County; for the maintenance of free beds in tuberculosis hospitals, for the relief of families impoverished by the disease, and for providing free luncheons for public school children improperly nourished or with tendencies toward tuberculosis.

Baltimore

Medical Certificates before Marriage.—A meeting was held June 1 in the interest of the medical endorsement of marriages under the auspices of the Social Hygiene Society. Local clergymen of the city and Drs. Lewellys F. Barker and Donald R. Hooker discussed the subject. The Social Hygiene Society has endorsed the resolution passed by the Episcopal Diocese of Maryland, and all clergymen of that body have pledged themselves to encourage the requirement of medical certificates from all persons who apply to them to be married.

MASSACHUSETTS

Personal.—Dr. Roland W. Brayton, Dorchester, Boston, was seriously injured in a collision between his automobile and a street car, May 2[illegible].——Dr. J. Arnold Rockwell, Cambridge, has succeeded Dr. F. W. White as medical advisor of the Massachusetts Institution of Technology, Boston.

Hospital Notes.—Carney Hospital, Boston, celebrates its semicentennial this month.——The New Melrose Hospital was formally dedicated May 30. The building has cost about $20,000, is two stories in height and of cement construction.——The Board of Charity has granted a charter to the incorporators of the Wing Memorial Hospital, Palmer, and it is planned to have the hospital ready to open September 15.——The workers who canvassed the North Shore towns, May 31, collected $6,000 for the North Shore Babies' Hospital, Salem.——The city council of Boston has adopted a loan order for $298,000 for additional buildings for the City Hospital.

MICHIGAN

State Board Election.—At the annual meeting of the State Board of Health at Lansing, Dr. Victor C. Vaughan, Ann Arbor, was reelected president and Dr. Thomas M. Koon, Grand Rapids, was elected vice-president.

Health Train to Tour State.—Arrangements have been made for a State Health Train under the personal direction of Dr. Robert L. Dixon of the State Board of Health, to leave Lansing, August 4, for a tour of the entire lower peninsula. The train will contain at least three exhibit coaches, and pictures, charts and models will be shown and demonstrations will be made, teaching the principles of disease prevention and setting forth the importance of good health.

New Staff for United Benevolent Association Hospital.—Dr. J. B. Griswold has been appointed honorary chief of staff, Dr. Alexander M. Campbell, chief of staff, Dr. Francis J. Lee, vice-chief and Dr. A. Verne Wenger, secretary of the new United Benevolent Association Hospital, Grand Rapids. Dr. Thomas M. Koon has been made chief of the medical department; Dr. William G. Young, chief of the surgical department; Dr. Mortimer E. Roberts, chief of the department of abdominal surgery and gynecology; Dr. Earl Bigham, chief of the department of obstetrics; Dr. Roy T. Urquhart, chief of the department of ophthalmology and otology; Dr. A. V. Wenger, anesthetist; Dr. Charles E. Hooker, dermatologist, and Dr. William Northrup, bacteriologist of the hospital. The consulting staff is composed of Drs. Orris E. Herrick, William Fuller, Malcolm C. Sinclair, Daniel S. Sinclair, Joseph B. Griswold, Frances A. Rutherford, James O. Edie and Homer C. Brigham.

MISSOURI

Secretaries Met at St. Louis, Not at Joplin.—The Society of Secretaries of County Medical Societies of Missouri held its annual meeting in St. Louis and not in Joplin, as was erroneously stated in The Journal, May 24, p. 1648.

New Officers.—North Missouri Medical Association at Marion, June 5: president, Dr. Ed S. Smith, Macon; recording secretary, Dr. C. W. Reagan, Macon; corresponding secretary, Dr. A. L. Cambre, Atlanta. The next meeting will be held in Moberly.——Ray County Medical Society at Richmond: president, Dr. Robert Sevier; secretary, Dr. L. D. Green, both of Richmond.

Personal.—Dr. M. O. Biggs, Bowling Green, has succeeded Dr. George Williams as superintendent of the Fulton State Hospital. Drs. E. F. Evans, Columbia, Z. T. Knight, Monticello, and Hermon S. Major, Hardin, assistants on the staff, have also reported for duty.——Dr. T. A. Coffelt has been elected president of the Springfield Hospital Association. The other officers are Drs. D. B. Farnsworth and H. S. Hill, vice-presidents; Dr. J. R. Boyd, secretary, and Dr. Lee Cox, treasurer.——Dr. Russell Hodge, night superintendent of the Kansas City General Hospital, left for Vienna, June 20.——Dr. James E. Logan has resigned as a member of the park board of Kansas City.——Dr. G. E. Scrutchfield, Marshall, has been elected superintendent of State Hospital No. 4, Farmington.——Dr. C. Lee Woolsey, Braymer, has been appointed assistant physician at State Hospital No. 2, St. Joseph.

St. Louis

Cornerstone Laid.—With simple ceremonies, the cornerstone of the Washington University Medical Department was laid, May 17. The scheme as planned is for a group of buildings including the medical school proper, the Barnes Hospital and the Children's Hospital. Robert S. Brookings, who donated $1,000,000 to the school, delivered an address and Rev. James W. Lee laid the cornerstone.

Commencement Exercises.—At the eighty-fourth annual commencement of the St. Louis University School of Medicine, June 5, a class of sixty-seven received degrees and the honorary degree of Doctor of Medicine was reinstated and conferred on Dr. Caleb Winfrey, Kansas City, a graduate of the school in the class of 1847, "as a just and proper recognition of his sixty-six years of service to humanity in the medical profession."

NEW YORK

New Officers.—Medico-Chirurgical Society of Central New York at Syracuse, June 5: president, Dr. E. G. Kern, Herkimer; secretary-treasurer, Dr. E. A. Gayde, Utica (reelected).

Personal.—Dr. Arthur J. Bedell has been appointed attending opththalmic and aural surgeon to the Albany Hospital.——Dr. Andrew F. Sheldon, Lyons, for sixty-three years a practitioner, is reported to be seriously ill at his home.——Dr. Raymond F. Kieb, Dannemora, has been appointed superintendent of the Matteawan State Hospital for the Criminal Insane, vice Dr. John W. Russell, resigned.——Dr. Edwin J. Kibbe, Saranac Lake, has been appointed resident superintendent of the Montgomery County Antituberculosis Hospital.

New York City

Policy of Carnegie Foundation.—Dr. Henry S. Pritchett, head of the Carnegie Foundation states that it is not the policy of the foundation with its fund of $140,000,000 for educational purposes, to crush sectarianism in colleges which cherish denominational tendencies. The resources of the Foundation may be used to whatever extent may be necessary in the crusade against the worthless medical schools throughout the country that operate under the names of worthy institutions under whose charters they take refuge.

Memorial to Bristow.—At a meeting of the New York Society of Anesthestists, the following memorial was drafted: "Algernon Thomas Bristow.—His editorial and practical hospital support of the advancement of the art of general anesthesia has time and again aroused the admiration and emulation of this body of anesthetists, and so active and influential has this work among his many followers been, that this society wishes itself placed on record as considering it monumentally constructive, and its cessation as a great loss to the surgical world."

Summer Campaign of Infant Salvation.—The announcement of plans for the summer has been made by the Babies' Welfare Association. These include active advertising work and systematic educational propaganda among mothers with a view to keeping the tenements clean. The prevention of deaths due to preventable conditions will be particularly emphasized. Up to June 1, there have been this year from all causes in this city a total of 5,852 deaths of babies under one year of age. This is a decrease of fifty-nine as compared with the same months of last year, a decrease that has been more marked in the Borough of Manhattan than in the other boroughs, there having been 108 fewer deaths than last year.

NORTH CAROLINA

The Hookworm Work.—Dr. B. E. Washburn, Rutherfordton, has been added to the field force engaged in the hookworm work of the State Board of Health. At present seven physicians are devoting their entire time to the hookworm dispensaries and up to date, eighty counties have made appropriations for this work. Eight of the counties which were first gone over have recently made additional appropriations for the purpose of having the hookworm dispensaries reopen in their territory.

Personal.—Drs. Hubert A. Royster, Raleigh, A. J. Crowell, C. M. Strong and J. P. Munroe, Charlotte, sail for Europe, July 3.——Dr. Albert Anderson has succeeded Dr. L. J. Picot as superintendent of the Central Hospital for the Insane, Raleigh.——Dr. L. B. McBrayer has been reelected health officer and city physician of Asheville.——Dr. William C. Horton, Raleigh, has gone abroad.——Dr. John S. McKee has been elected city physician of Raleigh.——Dr. F. T. Meriweather, Asheville, was operated on for appendicitis, June 7.

OHIO

State Board Changes.—At a meeting of the State Medical Board at Columbus, June 4. Dr. T. T. A. McCann, Dayton, was elected president and Dr. Lee Humphrey, Malta, vice-president.

Hospital and Dispensary Notes.—A tuberculosis dispensary has been opened at 8906 Woodland Avenue, Cleveland, by the Board of Health. The garden at the rear of the building is to be used as an open air retreat for patients.——Jewish physicians of Cleveland have opened a dispensary for patients of that faith at 2433 East Fifty-Fifth Street under the name of the East Side Free Medical Dispensary.——The new St. John's Hospital, Cleveland, is to be located on the site of the present hospital on Detroit Avenue and will have a capacity of 170 beds. The building will be four stories and a basement in height and of brick and terracotta construction.

Cincinnati

Flag Day Campaign.—Nearly $20,000 was raised by the Antituberculosis League at its Flag Day campaign, June 6.

Forchheimer Memorial.—The establishment of the Frederich Forchheimer chair of medicine has been decided on by the senate of the University of Cincinnati.——A memorial meeting of the Academy of Medicine was held June 9 in honor of Dr. Forchheimer at which many of his friends and associates paid tribute to his life and character.

Personal.—Dr. Harry Carroll has been appointed assistant physician to the Dayton State Hospital.——Dr. Martin H. Fischer, who has been seriously ill with appendicitis, is reported to be improving.——Dr. Charles A. Stammel, Jr., has been appointed a member of the staff of the contagious branch of the Cincinnati General Hospital.

PENNSYLVANIA

Commencement Week Clinics.—The School of Medicine of the University of Pittsburgh announces a medical program in connection with the commencement week exercises. Special clinics have been arranged at the Mercy, Children's, St. Francis' and the Eye and Ear hospitals on June 16 and 17 and lectures and demonstrations at the School of Medicine building on June 18.

Personal.—Dr. J. Clinton Starbuck, Media, was seriously injured June 10 when a motor car in which he was riding was struck by a trolley car. His left arm was so injured that amputation was necessary and it is feared that he also has internal injuries.——Dr. C. D. Wilkins, superintendent of the Wilkes-Barre City Hospital, has resigned to accept the position of superintendent of the Charity Hospital, New Orleans. Dr. J. T. Williams has been appointed associate surgeon and Dr. A. T. McClintock pathologist to the hospital.——Drs. G. M. Phillips and Joseph T. Rothrock, West Chester, have been elected members of the board of managers of the Chester County Hospital.——Dr. Charles S. Rebuck, Harrisburg, sailed for the Mediterranean June 14.——Dr. George B. Kalb, Erie, has been reelected president of the Erie County Antituberculosis Society and Drs. J. W. Wright and F. P. McCarthy have been elected directors.

Philadelphia

Baby Saving Show.—A baby saving show opened in Conversation Hall, City Hall, June 16. The exhibit is held under the auspices of the Child's Hygiene Association and will continue for three months. Nurses and other attendants will be present to give information and there will be daily lectures.

Further Increase in Typhoid.—The outbreak of typhoid fever has not been abated and the health authorities, who thought it due to industrial establishments allowing "raw water" to seep through loose connections in the city's filtered water mains, have had to make a further investigation as twenty-nine of the fifty-five new cases reported during the week ended June 14, are in South Philadelphia, where broken connections have not been found.

Personal.—Drs. William J. Taylor, George A. Ross and Clarence Faries sailed for Europe, June 5.——Dr. Charles F. Nassau had conferred on him the degree of Doctor of Laws by Villanova College, June 12.——Dr. Matthew Woods entertained the surviving members of the class of 1873 of the University of Pennsylvania at his home, June 17.——Dr. John S. Moffit, who has been seriously ill at his home from the effects of poison accidentally self-administered, is reported to be improving.

Social Work in Insane Hospital.—Assistant Director of Health and Charities Alexander Wilson has established a social service division at Blockley with Miss Harris, special agent of the department, at its head. She has four assistants and their work consists of learning the conditions responsible for the presence of the dependent children; making a social history of every case in the men's and women's psychopathic wards; visiting home of inmates to study conditions and causes. If it is found that a patient, suspected of insanity, can safely be put on parole for further developments, the social service division takes charge of the patient and reports progress.

GENERAL

Anticancer Society.—The executive committee of the organization recently formed to fight the increase of malignant disease in the United States, met in New York City, June 9, and selected as the name of the association, the American Society for the Control of Cancer.

Suspension of Manila Medical Bulletin.—In a communication dated Manila, April 23, the council of the Manila Medical Society announced that the publication of the *Bulletin of the Manila Medical Society* is suspended indefinitely in consequence of a fire which destroyed manuscript, plates and other property.

Southern Railway Surgeons Meet.—At the eighteenth annual meeting of the Association of Southern Railway Surgeons at Old Point Comfort, Va., June 3 and 4, the following officers were elected: president, Dr. R. J. Noble, Selma, N. C.; vice-presidents, Drs. J. F. Weathers, New Albany, Ind., W. P. Horton, New Wilkesboro, N. C., G. B. Thornton, Memphis, Tenn., and E. P. McCollum, Greensboro, Ala.; secretary-treasurer, Dr. J. U. Ray, Woodstock, Ala. (reelected), and member of the executive council, Dr. R. R. Shands, Washington, D. C.

Vessels from Guayaquil Fumigated.—On account of recent regulations of the port authorities of Guayaquil, Ecuador, under which vessels are required to anchor near the lower end of the city and thus become liable to infection from infected mosquitoes and because the officer of the United States Public Health Service on duty at Guayaquil has informed the chief quarantine officer of the Canal Zone that he has not the equipment for fumigating the larger vessels the fumigation of ships bound for Balboa from Guayaquil must be done after their arrival in Panama Bay, and after the fumigation, they must be held to complete a six-day quarantine.

FOREIGN

Malay States Medical Officer in the Canal Zone.—Dr. Malcolm Watson, at one time chief medical officer of the Estates Hospital Association, and senior district surgeon in the Federated Malay States Service and connected for thirty years with sanitary work in the Malay states, is visiting the Canal Zone to inspect the work being carried on there. On May 28 he gave a talk in the Mess Hall in Ancon Hospital descriptive of his work in the East.

Other Deaths Abroad.—Aside from the deaths reported by our foreign correspondents the following have recently occurred: Lyttleton Stewart Forbes Winslow, M.B., Cambridge, 1870, M.R.C.P. London, 1871; expert in lunacy and investigator of many famous criminal cases involving insanity; founder of the British Hospital for Mental Disorders; vice-president of the Medico-Legal Congress, New York, and chairman of the psychologic department; author of a manual on lunacy and of many other books and monographs on his specialty; editor for eight years of the *Psychological Journal*; died suddenly at his home in London, June 8, aged 69.

LONDON LETTER

(From Our Regular Correspondent)

London, June 7, 1913.

Amendment of the Insurance Act

As shown by recent by-elections, the insurance act is very unpopular. Government interference with the friendly societies which have during more than half a century evolved a plan of providing benefit for illness is irritating to a people who have always preferred to do things by voluntary effort rather than by the compulsion of the state. The immense undertaking of providing a sick allowance and medical attendance for twelve million persons has been attended with considerable friction. The red tape of bureaucracy renders action painfully slow in a matter in which promptitude is required. Sick persons complain that before receiving "sick-pay" they have to wait as long as three weeks while various blanks are being signed and inquiries made, whereas under the friendly society system this process occupied only a few days.

Again, the number of insured persons entitled to free medical attendance who nevertheless decline it and prefer to pay the physician of their choice who is not on "panel" (that is, has not accepted service under the act) is very large. In London it is 400,000. At present they lose the advantage of the capitation fee provided for them. The government intends to bring in an amending act to remedy these and other grievances. The British Medical Association is taking the opportunity of bringing forward a number of professional grievances for remedy. Thus if an operation has to be done under an anesthetic no fee is provided for the payment of the anesthetist; the physician has to provide one himself. This is an encouragement for him to administer the anesthetic as well as to operate, which is admittedly a dangerous course. The association also objects to the regulation which obliges insurance doctors to attend patients for illnesses, such as venereal diseases, caused by their own misconduct. In the contract practice of the friendly societies a man was not entitled to attendance under these conditions. Another condition included in medical benefit, which was also excluded in the contract practice of the past, is miscarriage or abortion. The association also requests that the physician may be allowed to make a small charge for night calls so as to discourage unnecessary calls and that when an insured person has an income exceeding $800 he shall not be entitled to medical attendance under the act but be required to make his own arrangements. At present persons with an income of $800 are eligible for insurance, but once insured they remain so although they afterward attain an income above this. The association is strongly in favor of the appointment of medical referees to whom cases of alleged malingering shall be referred.

The International Congress of Medicine

For the first time there will be a section of radiology at the forthcoming International Congress of Medicine. The meetings will be held in a lecture theater in the School of Mines which can be completely darkened and will be provided with a lantern for the demonstration of lantern slides. Provision will also be made for the illumination of original negatives. In the museum a room will be set apart for the exhibition of transparencies. The following are some of the subjects down for discussion, with the reporters of each: "Radiography of the Stomach and Intestine," Dr. Holzknecht and Dr. Leonard; "Radiography of the Chest," Dr. Walsham and Professor Wenckebach; "Radiotherapy and Malignant Disease," Dr. Abbé and Dr. Kienböck; "Roentgen and Radium Therapy in Gynecology," a joint discussion with the section of obstetrics and gynecology, Dr. Albers-Schönberg, Dr. Foveau de Courmelles and Professor Krönig; "Radiography of Bones and Joints in Orthopedic Surgery," joint discussion with the section of orthopedics, Drs. Haenisch, Nové-Josserand and Redard.

The Government Inquiry into the Sale of Nostrums

Some remarkable disclosures were made at the last sitting of the committee appointed by the government to investigate the sale and advertisement of nostrums. The attention of the committee had been called to a series of advertisements in popular magazines of preparations. The advertisements took the form of recommendations of these goods by a number of women. These were sometimes given in the form of answers to correspondents, and sometimes without requests for information having been received. Mr. Sidney F. Ely, the secretary and manager of Dearborn (a limited liability company) which indulged in this practice, was called. He was asked by the chairman if he was prepared to answer certain questions. He said that he was not, and that the sole proprietor of the business, Mr. James D. Daniels, was in America. A lawyer then asked leave to appear for Mr. Ely, and the chairman suggested that he had better give evidence. He said that some time ago Mr. Daniels consulted him and since then the advertisements had not appeared in the form of answers. He was asked if he knew whether or not the following women, with high-sounding names which had appeared, existed: Mlle. Florence Gauthier, Mlle. Marcelle Rouvier, Mildred St. Aubyn, Mlle. Agnes Depres, Mlle. Marguerite Fournier, and Mme. Lucie Robert. He replied that he did not know. Mr. Ely was recalled and asked the same question. He said that he had formed the impression that Mildred St. Aubyn existed. Asked whether he could produce any letters from women bearing the names he said he would not do so as they were private! The chairman warned him that the committee had power to call on him to produce any papers he had. He then said that the advertisements had appeared six months ago and that the names might be *noms de plume*! The advertising in the form of these reading-advertisements were paid for on a higher scale than would be advertisements in display type.

PARIS LETTER

(From Our Regular Correspondent)

Paris, May 30, 1913.

Personal

The Académie française has just awarded the Broquette-Gonin prize, amounting to $2,000 (10,000 francs) to Dr. Grasset, professor of general pathology and therapeutics at the Faculté de médecine de Montpellier, for his collective works. This prize, intended to reward the author of a philosophical, political or literary work considered capable of inspiring love of the true, the good and the beautiful, has been awarded for the first time. Besides his works in pure science and medicine, Grasset is the author of numerous publications or studies of a psychologic, moral or social character.

The council of the Faculté de médecine de Paris has nominated Dr. Auguste Broca, *agrégé* of the school, and surgeon of the hospitals of Paris, for the chair of minor surgery.

The Faculté de médecine de Paris has awarded the Chatauvillard prize, amounting to $400 (2,000 francs) for 1913, to Drs. Beurmann and Gougerot of Paris for their work on sporotrichosis.

The Use of Ether for Peritonitis

Dr. Morestin, surgeon of the Bichat Hospital, recently read an interesting paper before the Société de chirurgie in regard to two cases of serious peritonitis in which Dr. Témoin of Bourges obtained unexpected results by using ether to cleanse the peritoneum. Morestin has used ether since 1901 in peritoneal infections both as a disinfectant and as a preventive measure after suppurative salpingitis or an intestinal operation in which the contents of the digestive tube have leaked into the abdomen, etc., and also as a curative measure in dangerous peritonitis after the perforation of a gastric or duodenal ulcer and in acute appendicitis. He begins by cleaning the peritoneum carefully. Then he pours ether into the interior of the abdomen and into the pelvis and closes the abdomen. The ether begins to volatilize as soon as it is poured out. Abundant vapors are formed. The volatilization continues after the abdomen is closed, and a marked meteorism is produced. As soon as the ether is poured in, the patients have a short period of agitation; then they become calmer and an hour following the operation seem relatively quiet. There is a sort of torpor during which the pulse is excellent. Vomiting is much less frequent. In a word, the operative sequelae are very favorable. In most cases recovery is ideal.

The ether has several actions: It acts as a local antiseptic; it spreads throughout the abdominal cavity, the intestines and stomach are bathed in ethereal vapors and this appears to have no injurious effect on the serosa. No inflammatory reaction capable of causing adhesions occurs, and Morestin has never observed any accidents attributable to these vapors in the patients operated on. Ether has a tonic and antiseptic action.

Dr. Auvray recently operated on a patient aged 59 who had very serious peritoneal symptoms. He had double hernia with symptoms of strangulation, but the orifices were free, the sacs empty and the hernial regions not painful. Auvray made a medium laparotomy and found pus in the abdomen; the intestinal loops were red and covered with a false membrane. At one point was a little perforation situated on an intestinal loop which had become caught and which the patient had released himself. This perforation was sutured and about a quart of ether poured into the abdomen. Then it was sponged off before the abdomen was closed. Auvray says that he has never seen a patient in such a condition recover so easily.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, May 23, 1913.

Personal

The attempts of the Vienna faculty to find a substitute for von Noorden among the German professors have so far been fruitless. After the refusal of von Krehl, who is usually proposed for a substitute whenever an opportunity arises, Adolf Schmidt of Halle is now being considered.

May 22, A. Baginsky, the Berlin psychiatrist, celebrated his seventieth birthday. On this occasion he was elected honorary member by the section on pediatrics of the Verein für innere Medizin und Kinderheilkunde.

A Titled Exponent of Friedmann's Methods

Americans may justly resent the opinion often expressed in both the lay and medical press, that Dr. Friedmann's great success was due to the fact that his dealings were with the American public and that nothing of the kind could occur in Germany. But in Germany also we have only too often had the experience that physicians, whose scientific importance and practical success would not stand the scrutiny of a conservative critic, have had many followers in the public. I will not refer to examples in the past, but will limit my remarks to an oculist who has been practicing in Germany for some time, and who has succeeded in gaining the reputation of a miracle-worker. In this instance it is a certain Count Wieser, whose former history is apt to lend him some fame in the eyes of the public. It is said that he used to be an army officer and was also active in a military campaign, and only later in life turned to a medical career. In some way he was able to gain access to the court circles and to treat at first some ladies of the court and others in high station, and, through their mediation, later on the empress herself. Although a wide democratic feeling prevails in Germany the knowledge of such social relations is apt to instil in many people an idea of the high importance of such a physician, and the suggestion thus created enhances their belief in the success of his treatment. Besides, Count Wieser impresses on his patients, as is generally the case only with charlatans and swindlers, the idea that his treatment is sure to succeed, and especially that he is able to cure senile cataract without operation. Notwithstanding the good results gained in surgery and their acknowledgment by the people, the fear of the knife is still sufficiently wide-spread to prompt patients to seek a physician who promises to cure with lotions and salves affections which all regular ophthalmologists can remove only by operation. This "miracle worker" is said to have cured not only senile cataract, but also detachment of the retina, atrophy of the optic nerve, glaucoma and similar troubles, and thousands of patients are ready to endorse his statements. The worst thing is that to my knowledge and according to the observation of experts whom I have questioned, not a single case of any real affection known to have been diagnosed by a scientific ophthalmologist has been cured by Wieser's treatment. And inasmuch as the titled oculist keeps his different procedures secret, has never published any scientific article or spoken before a medical society on his method, and has never submitted his patients to the examination of other members of the profession, the proceedings of Wieser may justly be classified in a category not very different from that of Dr. Friedmann's.

The Fees of the Insurance Physicians

After the promulgation a short time ago of the standard regulations which will form the basis of the new Krankenkassen and will come into effect Jan. 1, 1914, the Leipsic League on its part also issued standard regulations, which were worked out in accordance with the resolutions of the Aerztetag at Stuttgart, and will form the basis for the dealings of the organization of insurance physicians with the new Krankenkassen The most important change which the new arrangement of the imperial insurance law has caused and which is of the greatest influence on the fees of the insurance physicians is the requirement that the income limit for wage-earners to take out sickness insurance is to be increased from the $500 (2,000 marks) formerly required to $625 (2,500 marks), and the extension of the right of insurance to classes of higher economic position.

It would be the economic suicide of physicians to continue to treat these classes on the basis of the former minimal fee, which, for instance, in two great Berlin insurance organizations, amounts to 11 cents (45 pfennige) for one consultation and 50 cents (2 marks) for a quarter of the year. In the Reichstag the opinion was expressed by the representatives of almost all parties that in connection with the higher insurance limit, larger and more definite fees should be required of these financially better-situated classes, but no feasible method was provided for accomplishing this. For the Reichstag failed to establish a higher class than $450 (1,800 marks) and thus to include the insurable in the new class with an income above $500 (2,000 marks).

For this reason the Leipsic League, while abandoning the former demands, requires a differentiation of the fees for members of the insurance societies under $450 and those above $450. Different fees will also be required for different classes entitled to insurance, and the model contracts distinguish the following: (1) those who take up insurance voluntarily, that is, those who were not insured immediately before the time for enforcement of the new law; (2) those who abandon the obligatory insurance and continue a voluntary insurance. Among the latter, however, are many of those who have lost their position (on account of lack of work, etc.), where they held obligatory insurance, who wish to retain the benefits of the insurance until they obtain a new position. On the other hand, a large number of those who have reached a better social position and an income above $625—which circumstance frees them from insurance—continue the voluntary insurance. Both categories may now determine for themselves the wage-class in which they wish to be further insured, and by their belonging to a class below $450 they are allowed to pay the smaller medical fee. It can be assumed that the first category, that is, those without employment who continue their insurance voluntarily, will find within six months a new position with obligatory insurance. For this reason the model contract provides that the higher fee shall be charged only to such members as continue their insurance longer than a half year, as otherwise it can be assumed that they have found better income.

It is provided that, if the income will justify it, the fee for the wage-class under $450 shall be not less than $1.25 (5 marks) for a single member and $3.75 (15 marks) for the insured family, including the member himself; for the obligatorily insured members with a higher income, 50 per cent. higher payment, and for voluntary members, with the foregoing exception, a 100 per cent. higher fee will be charged. The situation is quite different with classes who take up insurance voluntarily, without having been insured shortly before. These are usually: 1. Persons who would be amenable to obligatory insurance if their main occupation were of a higher grade; but they may join voluntarily if their work is performed outside of their regular employment and without any pecuniary returns, or if it is a temporary one; included in this class are persons who stand economically and socially higher on account of being independent because they own their business, or people with an independent income, pensioned officials, etc. 2. Employers of labor who employ regularly not more than two persons liable to insurance, and whose income is not over $650; in this class are the majority of the small and middle-class farmers, merchants and artisans in small and medium-sized cities. 3. The family dependents of the persons in the second class if they are employed by the head of the family, without any money compensation and without any personal industrial relation to his business, and if their entire income does not exceed $650. The income of the head of the family, which is to serve for the support and medical care, is not included. It is known how few persons there are in rural districts who have an income of $500, not speaking of more. It is the right of insurance of these classes which forms the chief danger for the physicians in the country and small cities, and threatens to deprive the rural districts of physicians when the insurance practice with its fees growing continually smaller becomes the only source of possible income and private practice entirely disappears, as the entire rural population is in the insurance class.

In order to eliminate this danger, it is proposed to refuse altogether to treat these groups as insurance patients, and according to Section 215.2 to limit the service of the insurance societies to furnishing sick-money or sick-care. So far as the free choice of physicians is concerned, this shall be required at least for groups of insured with income more than $450, and for those who voluntarily continue their insurance, and although, to do justice to the existing conditions, a limited system of choice may still be carried on for the groups of the obligatorily insured.

By this wise limitation of the requirements in regard to the free choice of physicians, the German medical profession has shown strikingly that it is not inclined to "terrorize" its opponents and that no conflict with the insurance societies is intended.

BUDAPEST LETTER

(From Our Occasional Correspondent)

Budapest, May 31, 1913.

Age Limit of Professorship in the University

The professorial board of the University of Budapest is of the opinion that a man's best days are over at 60 years of age. According to report several professors of the medical faculty and some of the other faculties will be asked to retire because they are beyond 60. Luckily those professors who will be retiring are all teaching theoretical subjects and thus the loss of the university will be reparable.

Death of Professor Korányi

The dean of Hungarian medical science, Frederic Korányi, died, May 19, after a long, eventful and laborious life. He died in his eighty-fifth year. Sixty years of his life were spent with incessant work in the field of medicine. He began his career as a county physician in Nagg-Kallo, Hungary, where he soon attracted the attention of the medical authorities so that in two years he was the chief physician of the county hospital (in 1863). His fame, however, went also beyond his county, so that in 1864 he received an invitation from the city of Budapest to fill the position of physician-in-chief of the city typhoid hospital. Less than two years later the professorial council of the university invited him to give trial lectures (this is the rule in the Hungarian universities) before medical students. His lectures had such an effect on his audience that the students applauded and sent a deputation to the professorial council, asking it to instal Korányi as professor as soon as possible. He was installed in 1866, and since then he has taught medicine (for to say that he "lectured" does not fully characterize his work, because he taught his students in the true sense of the word) until 1912, when he retired from teaching in order to devote himself to social hygienic reforms.

Korányi's fame and reputation could not remain within the boundaries of the country. He was well known in Germany where all the first-class medical societies hastened to invite him to hold lectures, and offered him corresponding memberships. In the German medical papers Korányi's name was often found as author of various articles or in references to him as authority on some clinical subject. Korányi was invited also to the chairs of foreign universities, but he never even considered leaving his country. Korányi was *persona grata* to the king. In 1876 he was given the title of "Advisor to the King"; in 1881 he received the Iron Cross; in 1894 he was enlisted among the noblemen and became "von Korányi"; in 1909 he was given a baronetcy.

Von Korányi and his clinic have worked on almost every important question of clinical medicine. His achievements, however, were most noted as to the diagnostics of heart-diseases, the displacement of the spleen, the relative insufficiency of the heart valves and the relation of typhoid to malaria. His clinic was built in 1878, and it created quite new medical conditions in Hungary. The yearly turnover in this hospital amounted in the first years to eight or ten thousand. In order to promote the better education of the medical students he organized the "clinical clerk" system, which consisted in employing twelve students alternately for two months in the clinic. As the clinic has from ten to fifteen assistants too, the clerks had ample opportunity to learn from expert clinicians. Korányi will never be forgotten for his work in postgraduate medical education. His greatest achievement, however, was his work against the spread of tuberculosis. He started a movement about twenty-five years ago which has grown to be such an organization that foreign doctors are coming to study our system (sanatoriums, dispensaries and convalescent homes for lung patients). The latest result of his incessant activity toward the check of tuberculosis was the notification six weeks ago by the minister of public hygiene of every doctor in the country, of the coming in force of the new law, according to which every case of advanced tuberculosis is to be reported to the hygienic authorities of the towns, villages or parishes, in order that isolation may be provided and the homes disinfected after the eventual death of tuberculosis patients. I do not exaggerate by saying that in the last twenty-five years the mortality from tuberculosis in Hungary decreased on an average from 22,000 to 25,000 deaths. This is mainly attributable to Korányi's praiseworthy energy.

The Curability of Cancer

The Hungarian medical journals are extensively criticizing the new treatment of cancer, which was too optimistically dealt with at the gynecologic congress in Halle. Although the new treatment was recommended by such prominent professors as Krönig of Freiburg and Döderlein and Bumm of Berlin, still we must be skeptical, our papers say, in accepting such rumors with full faith. In the last decade almost every year has brought a crop of new and "certain" treatments for cancer, but all failed. It is desirable that this new treatment shall be permanent and reliable, capable of ending the sufferings of many a thousand men and women—not to say children, although we have seen cases of cancer in subjects aged 17 and 18. The new treatment combines mesothorium rays and Roentgen rays. The latter are successfully employed through aluminum filters, without doing any damage even by long use; the mesothorium rays are employed in special apparatus. Mesotherium is scarce, the whole production being taken up already. One application lasts twelve hours, and thus with one tube only one patient can be treated. The professors exhibited patients who were entirely cured, one for five years, two for three years and sixteen for one year, without trace of recurrence. In all, one hundred cases have been treated. I saw the patients exhibited; they were beyond all doubt cured, and the absence of any cancerous growths or remainders was striking.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 26, 1913.

Discussion on Medical School Inspection

The problem of medical inspectors of schools has attained marked prominence in our country lately. The Vienna Medical Council has organized a special investigation of this question by various officials and medical men. The first question was: Shall the appointment of medical school inspectors be a whole-time appointment, or shall it be an "accessory" appointment leaving the doctor free time for other remunerative work? The majority of the answers favored the "accessory" appointment, as only very few medical school officers, perhaps only the superintendent of the medical school inspectors, could at present expect to be paid on a scale sufficient to compensate for the income from a private practice.

The second question was: Shall the medical school inspector be a subordinate of the municipal or political board of health, or should he possess a consultative or decisive vote in all matters pertaining to school hygiene? Nearly without exception, this was answered in favor of the first alternative.

The third question was: Which schools should be under medical inspection, and which schools could do without it? The answer was that all schools, beginning with the kindergarten, up to the high schools and universities, including the apprentices' schools, should be under medical supervision. Special care should be given to the private schools and the boarding-schools. A number of questions dealt with the duties of the school doctor, and his rights. The hygiene of the schoolrooms, ventilation, light, cleanliness, water-closets and the hours of work should be controlled by him. But the main point of the doctor's work should consist in the hygienic control of the pupils: exact examination of the "school recruits," search for any defects, examination of pupils every few months, exclusion of children with contagious or infectious diseases, and the instruction of parents in regard to the advisability or necessity of treatment of existing defects or diseases. The majority of the experts were opposed to all treatment by the medical school inspector. His task should be purely a prophylactic one. Therefore special attention should be paid to the eyes, ears and teeth and to diseases of the organs of locomotion, of circulation and respiration. Furthermore, the school doctor should endeavor to prevent such defects as are often the result of the school: nervous overstrain, defects of an orthopedic or static nature, school anemia and school-propagated infections. The oversight of athletics, of games and of open-air classes would also belong to his duties. A diversity of opinion prevailed in regard to sexual instruction, which of course should not take place in the lower grades. Some experts thought that this problem did not belong to the doctor's domain, while others insisted that the school should not tackle this problem at all. A valuable suggestion was offered that pupils leaving the school should be examined and advised as to the choice of an occupation from the point of view of physical fitness. The medical school inspector should also observe the hygienic conditions of the teachers and the people living in the schools.

All experts advised against treatment by the school doctor; some wanted to send the poor children to the public clinics or outpatient departments of the hospitals; some demanded special school clinics and an increase of the numbers of appointed specialists under the poor-law. Only a few thought that an examination by the house physician of the family should make the pupil exempt from the examination by the school doctor. In any case, the school doctor should never restrict the field of the private doctor or the family physician. The office of school doctor should be open to all professional men, but they should absolutely abstain from treatment in this official position. A maximum limit of 12,000 pupils, if the doctor is appointed for the whole time, of 3,000 if the appointment is only part-time was favored. The fee should be about 2 kronen (40 cents) per head per year. An animated discussion took place about the question, What kind of postgraduate work is required for a school doctor? The majority were of the opinion that the general practitioner was not able to decide alone in many cases of otologic, ophthalmologic and odontologic diseases, although by attending special classes in these branches of medicine, he might be able to do valuable work in examinations in special branches. Therefore the appointment of specialists (for eye, ear, nose, throat, for speech defects, for teeth) was imperative. The Board of Education will undoubtedly use the investigation in framing new rules pertaining to the service of medical school inspection in Austria.

Marriages

WALTER DENNIS KENDIG, M.D., Kenbridge, Va., to Miss Helen Murray Yates, in Lunenburg County, Va., June 5.

FREDERICK DE SALES CHAPPELEAR, M.D., Hughesville, Md., to Miss Katherine P. Hughes, at Baltimore, June 3.

GEORGE ROE LOCKWOOD, JR., M.D., New York City, to Miss Louise Anne Dobel of Montreal, June 5.

CHARLES ALFRED WEST, M.D., Cleburne, Kan., to Miss Rosa Lee Bryan of Kansas City, Mo., June 4.

SYDNEY M. MACLEAN, M.D., Tacoma, Wash., to Miss Rosebud Featherling of Seattle, Wash., June 7.

GEORGE ALBERT MAY, M.D., Audubon, Iowa, to Miss Beulah Hayden of Wall Lake, Iowa, June 4.

WALTER F. SCOTT, M.D., Birmingham, Ala., to Miss Sally van Zile in New York City, June 3.

EARL EBBET BABCOCK, M.D., to Miss Lena Belle Losee, both of Adams Center, N. Y., June 4.

GEORGE S. EVERHART, M.D., Hagerstown, Md., to Miss Edith Phreaner, at Baltimore, June 6.

Deaths

Harman George Howe, M.D. University of Vermont, Burlington, 1873; New York University, New York City, 1875; a member of the American Medical Association; president of the Hartford Hospital for many years; at one time president of the Hartford City Medical Society; visiting physician to the Retreat for the Insane, Hartford, and surgeon to the Hartford Hospital; died in Stamford Hospital, June 12, from fracture of the skull, received in a rear-end collision between trains at Stamford, aged 63.

Hugh Baker, M.D. University of Pennsylvania, Philadelphia, 1901; a member of the American Medical Association; local surgeon for the Baltimore and Ohio System; a member of the staff of the Cottage State Hospital and one of the founders of the Yough Medico-Social Club; a leading practitioner of Connellsville, Pa.; died in Mercy Hospital, Pittsburgh, May 28, from septicemia, due to an operation wound, aged 45.

Walter C. Gilday, M.D. Albany (N. Y.) Medical College, 1894; a member of the American Medical Association and New York Academy of Medicine; lecturer on surgery in the New York Polyclinic Medical School; attending surgeon to St. Elizabeth's, French and Polyclinic hospitals; died at his home in New York City, May 31, from acute gastritis, following ptomain poisoning, aged 42.

Gustavus Philemon Head, M.D. Rush Medical College, 1884; a member of the American Medical Association; professor of otology, laryngology and rhinology in the Chicago Post-Graduate Medical School; well known as a specialist and publisher, for several years, of the "Practical Medicine Series of Year Books"; died at his home in Austin, Chicago, June 11, from pneumonia, aged 51.

William Rush Patton, M.D. Rush Medical College, 1862; commissioned surgeon of volunteers during the Civil War but relieved from active field service by the War Department on account of a family left dependent on him by the death of his father and brother; for seven terms mayor of Charleston, Ill.; died at his home, May 12, from cardiac embolism, aged 76.

Robert Lauder, M.D. Yale University, New Haven Conn., 1871; a member of the Connecticut State Medical Society; a veteran of the Civil War; for forty years a practitioner of Bridgeport, Conn.; surgeon in charge of Fitch's Home for Soldiers, Noroton, Conn.; died suddenly in that institution, May 31, from disease of the kidneys, aged 72.

William Joseph Wickman, M.D. University of California, San Francisco, 1883; a member of the American Medical Association; president of the San Rafael (Cal.) Board of Education for seventeen years and president of the San Rafael Club for fifteen years; died at his home, May 29, from cerebral hemorrhage, aged 58.

Ernest M. Ellaby, M.D. Hospital College of Medicine, Louisville, Ky., 1904; a member of the Kentucky State Medical Society; formerly a member of the American Medical Association; died at his home in South Park, June 3, from disease of the stomach, aged 37.

John Neff, M.D. New York University, New York City, 1858; a member of the American Medical Association; acting assistant surgeon, U. S. Army, from 1861-65; vaccine physician of Baltimore from 1863-67 and president of the Baltimore Medical Association in 1878; for more than twenty years chief surgeon of the Baltimore and Ohio Railroad and for more than fifty years a resident of Baltimore; died at his home, June 5, from the effects of periostitis of the inferior maxilla, aged 81.

Austin Taylor Fink, M.D. New York University, New York City, 1869; a member of the Medical Society of the State of New York and a veteran of the Civil War; first health officer of the town of La Grange, postmaster and justice of the peace; died at his home in *Freedom Plains*, May 30, aged 69.

Allen Mott Ring, M.D. New York University, New York City, 1867; a member of the American Medical Association and for more than twenty-five years proprietor and superintendent of a sanatorium at Arlington Heights, Mass.; died at his home in Arlington Heights, June 3, aged 68.

Jonas J. Good, M.D. Northwestern University Medical School, Chicago, 1868; for many years a member of the Indiana State Medical Association; and for sixty-three years a resident of Huntington County; died at his home in Warren, June 9, from paralysis, aged 81.

Louisa Van Vleet Spicer Wright, M.D. University of Michigan, Ann Arbor, 1885; a member of the American Medical Association; of Camas, Wash.; aged 50; while harnessing a horse, May 31, was kicked by the animal and died from her injuries a short time afterward.

Frederick T. D. Cherry, M.D. University of Nashville; Tenn., 1868; a member of the Oklahoma State Medical Association; health officer of Sequoyah County, Okla., since statehood; died at his home in Sallisaw, May 26, from aneurysm of the thoracic aorta, aged 72.

Jens Ohnstad, M.D. Minneapolis College of Physicians and Surgeons, 1903; a member of the American Medical Association; died at his home in McIntosh, Minn., May 25, from injuries received in the overturning of an automobile a few hours before, aged 44.

Luther M. Davis, M.D. Physio-Medical College of Indiana, Indianapolis, 1900; a member of the Indiana State Medical Association; for five years township trustee; died at his home in Hayden, March 20, from the effects of an overdose of morphin, aged 39.

Frederick Asa Crane, M.D. Bellevue Hospital Medical College, 1866; a member of the Medical Society of the State of New York; physician to the Lewis County Home; for two years president of the village of Lowville; died at his home, June 2, aged 72.

Augustus S. Smith, M.D. Pennsylvania Medical College, Gettysburg, 1859; a veteran of the Civil War; for one term prothonotary of Lebanon County, Pa., and for more than fifty years a practitioner of Lebanon; died at his home, June 4, aged 73.

Charles H. Holt, M.D. University of Pennsylvania, Philadelphia, 1882; a member of the Michigan State Medical Society and Grand Rapids Academy of Medicine; died at his home in Grand Rapids, June 2, from cerebral hemorrhage, aged 58.

Lyell Reppert, M.D. State University of Iowa, Iowa City, 1902; a member of the American Medical Association; of Muscatine. Iowa; died suddenly at the Broughton Sanitarium, Rockford, Ill., May 29, from heart disease, aged 34.

Silas Addison Wessels, M.D. University of Michigan, Ann Arbor, 1878; a member of the Medical Society of the State of New York; died at his home in Canajoharie, N. Y., March 20, aged 61.

John R. Tilbrook, M.D. Western Pennsylvania Medical College, Pittsburgh, 1901; a member of the Medical Society of the State of Pennsylvania; died at his home in Pitcairn, June 3, aged 40.

Archibald Borden Sellards, M.D. Miami Medical College, Cincinnati, 1875; a veteran of the Civil War; died at his home in Lawrence, Kan., April 20, from cerebral hemorrhage, aged 68.

Roland Cramer, M.D. Drake University, Des Moines, Iowa, 1895; University of Pennsylvania, Philadelphia, 1896; died at his home in Des Moines, June 3, from heart disease, aged 41.

Margaret Violet Covey Lane Kimball, M.D. University of Michigan, Ann Arbor, 1880; died at her home in Healdsburg, Cal., April 17, aged 60.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THIOCOL AND SYRUP THIOCOL, ROCHE

Reconsideration of Acceptance and Deletion from New and Nonofficial Remedies—A Report of the Council on Pharmacy and Chemistry

Seven years ago the Council accepted *Thiocol* for inclusion with New and Nonofficial Remedies and *more recently* also a preparation of it, Syrup Thiocol, Roche. *Recently* the Council was advised that the product was being advertised to the public, both in this country and abroad, under grossly exaggerated claims. It, therefore, directed that the matter be brought to the attention of the American agent for Thiocol. This was done. The Council, having considered the agent's reply, voted that Thiocol and Syrup Thiocol, Roche, be omitted from New and Nonofficial Remedies; it further authorized *publication of the following report, which has been submitted both to the American agents and* to F. Hoffmann-LaRoche & Co., Basel, Switzerland.

W. A. Puckner, Secretary.

Syrup Thiocol, Roche (New and Nonofficial Remedies, 1913, p. 124), is a syrup containing Thiocol as its effective component. It has come to the knowledge of the Council on Pharmacy and Chemistry that a similar *preparation, namely, a syrup containing Thiocol as its effective component, is advertised to the public abroad under the name* "Sirolin," by the manufacturers of Thiocol, F. Hoffmann-LaRoche and Co., Basel, *as a cure for consumption ("Lungencatarrh"), asthma and* whooping-cough (*Fliegende Blätter*, March 1, 1912).

The same firm through the American house, the Hoffmann-LaRoche Chemical Works, New York, registered *the name* "Sirolin" for this preparation as a trade-mark *in this country* and shortly thereafter sold and assigned to the Sirolin Company, a newly organized New York corporation, the *Sirolin* trade-mark and everything that went with it. This company has advertised the product to the American public as rendering people "*immune* against the most common, troublesome and dangerous of ailments—the host of diseases that affect the throat and lungs" and has recommended its "remedial virtues" "in incipient Consumption, in deep-seated Coughs and Colds, La Grippe, Bronchitis and Whooping-Cough" and "effects" are said to be "quick and permanent." (Worcester *Telegram*, March 25, 1911).

The rules governing the acceptance of proprietary articles for N. N. R. prohibit the direct advertising to the public, in this and in foreign countries, of articles other than disinfectants and foods. In explanation of this prohibition the Council says:

> "The impossibility of controlling irresponsible claims which are usually made in advertisements to the public, the well-known dangers of suggesting by description of symptoms to the minds of people that they are suffering from the many diseases described, the dangers of an unconscious and innocent formation of a drug habit, and the evils of harmful self-medication, including the dangers of the spread of many infectious and contagious diseases when hidden from the physician, and similar well-known considerations, are the reasons for discouraging, in the interest and for the safety of the public, this reprehensible form of exploitation."

In view of the well-established fact that the most important of all factors in the cure of consumption consists in an early and accurate diagnosis, followed by general treatment, the Council considers that the advertising of a syrup of Thiocol, under the name "Sirolin," by the manufacturers of *Thiocol*, F. Hoffmann-LaRoche and Co., and by a company, the Sirolin Company to which the manufacturers sold the trade-mark and other rights for this preparation, involves not merely a serious infringement of its rules, but a menace to the public. The Council has, therefore, voted to delete Thiocol and Syrup Thiocol, Roche, *from the* list of New and Nonofficial Remedies.

WHAT PHARMACISTS THINK OF THE SARSAPARILLA FETISH

For pharmacy at its best we turn to the *Druggists Circular.* The following, from the May, 1913, issue, is one of the reasons we do so:

"*Compound Extract of Sarsaparilla.*—F. P. V., New Jersey, writes: 'Can you suggest a formula for a compound extract of sarsaparilla that could be retailed for about 50 cents a pint?'

"We can, but know of no reason why we should, and do not believe that we shall. We think pharmacists should practice pharmacy, and if they do not find this sufficiently remunerative and so decide to go into the handling of merchandise, they should select lines that will not bring discredit on their vocation. There are already too many fake cure-alls on the market. It would be better for pharmacy as a profession and for the drug business as a mercantile pursuit if the whole nostrum outfit were relegated to what someone has spoken of as the 'category of unindexed oblivion.' Fakers *will* fake; they don't seem to care; but druggists, as followers of an honorable calling, cannot afford to play grim jokes on trustful seekers after health."

Correspondence

Sanitary Flood Survey

To the Editor:—The first sanitary flood survey of the Ohio and Wabash rivers was made during the week of April 7, 1913, and is a good example of emergency sanitation. The United States government is better fitted than any of the states to initiate emergency sanitation, and on this account on April 7 the Indiana State Health Commissioner, Dr. Hurty, was notified that a boat survey expedition would start from Louisville, Ky., April 8, and that the government wished representatives of the states of Indiana, Kentucky and Illinois to accompany this expedition.

Major James A. Logan, Jr., of the Quartermaster's Department of the U. S. Army chartered a steam packet, the *Ed Myer*, on which were placed several car-loads of lime in 40-pound sacks, this size being the easiest handled, a large quantity of potassium permanganate in 1-pound cans, several thousand units of typhoid vaccine, several thousand small-pox vaccine points and several thousand units of diphtheritic antitoxin. For emergency work a ration consisting of salt pork, flour, coffee, sugar and condensed milk was added.

Major P. C. Hutton, surgeon, U. S. Army, was put in command of the expedition. Dr. W. L. Heiser of Bowling Green, Ky., represented the State Board of Health of Kentucky and Mr. R. W. Douglas of the Indianapolis *News* and I represented Indiana.

The first problem in sanitation was our boat, the condition of the bed-clothing and the food. The latter was served by a cook who, together with his wife and son, was undoubtedly a victim of the hookworm. The water to drink was the filthy Ohio. This water I found was used by the crews of the river boats and many inhabitants along the river without any boiling whatever.

The scheme for this emergency survey was as follows: By telegram or telephone, the health officer or some prominent citizen at each point was notified of the probable hour of the boat's arrival and requested that as many of the leading citizens as possible be asked to meet the boat. The people were notified of the arrival of the boat by the United States lighthouse tender's signal, and Major Hutton would give a short talk on preventive work, instructing the people to cleanse their houses by scraping the mud off the floor and then scrubbing the floors with a solution of potassium permanganate, sprinkling lime in the cellars and outhouses and wherever there was decomposing material. In some places in which the mud and filth were great in the streets, it was shown that these should be scraped or washed by the fire department and the liquid mud and débris carted away to be used as fertilizer. Its richness in fertilizing material was easily shown to those with normal olfactory nerves. After Major Hutton's talk, Dr. Heiser spoke in Kentucky towns and I in Indiana towns, showing the necessity and the use of the typhoid vaccine and exhibiting ourselves as having passed through the ordeal without any bad effects. I am sorry to say that quite often it was necessary to instruct the health officers and some of the physicians present as to the method of using the vaccine. Our endeavor was to leave enough disinfectants and vaccine to supply the emergencies, later doses to be forwarded from the State Board of Health.

As a concrete instance of efficiency and inefficiency in sanitary work, I would mention Cannelton and Tell City, Ind. At Cannelton the mayor and the Citizens' Relief Committee were supplied with rations from the government and no man was given food until he had assisted in cleaning the streets, a portion of each day being devoted to cleaning the town. At Tell City the mayor distributed rations himself to whomever he pleased and did nothing to clean the town. Emergency work of this character must be done at the start by the local authorities. The streets of Tell City had been untouched for four days at the time of our arrival. As another example of efficiency, I wish to mention that at New Harmony, Ind., the city health officer had printed sanitary regulations and in a boat paddled around the streets pasting them in places long before the flood receded.

To make work of this character effective, it is necessary first to have strong and substantial backing, financially and otherwise, the moral support of the authorities, efficiency and courage in health officers and, most of all, "hustle" in the man who is doing the work. A day's loss in time of start may result in hundreds of cases of typhoid fever and thousands of dollars of damage.

After the first survey is made, this should be followed up in a week or ten days by a second to see whether or not the recommendations of the first have been carried out and the proper amount of typhoid vaccine given. At the end of another week a third survey can be accomplished by mail from the reports from the health officers at each place.

In towns in which there were inefficient health officers or incompetent mayors, I recommended to the governor and also to Dr. J. N. Hurty that a National Guard medical officer with a sufficient number of hospital corps be stationed to supervise the sanitary measures instituted. The National Guard knows no politics in distributing relief and the uniform impels respect and obedience; great good is thereby accomplished.

At the time of writing this article, Gen. Charles A. Garrard, Quartermaster-General of the Indiana National Guard, has by order of the governor been sent to the towns along the Ohio and Wabash rivers needing assistance. I believe that by so using a National Guard officer a uniformity in relief and sanitary measures can be accomplished which will be followed by better results than if left to local authorities. Although at some places such as Evansville, Cannelton, New Harmony and Leavenworth the health officers and authorities were working well together for the public's good, at other places friction had developed, allegations of a political nature had been made and inefficiency was present.

The excellent work done by the National Guard during the flood emergencies in Indianapolis, Peru and other places is well known. With medical supplies and equipment ready and men trained in this special kind of work they were ready to go at a moment's notice, and I am more than ever convinced that flood emergencies should be handled by the medical officers of the regular Army and the National Guard.

Frank W. Foxworthy, M.D., Indianapolis.
Captain, Medical Corps, Indiana National Guard; First Lieutenant, Medical Reserve Corps, U. S. A.

Medical America Seen with Foreign Eyes

To the Editor:—Under this title an editorial was published in The Journal, Jan. 25, 1913, p. 286, in answer to my article in the *Münchener medizinische Wochenschrift,* Nov. 5, 1912, p. 2463.

You evidently feel hurt in your quality of American by several of my critical remarks about some American organizations, and pour the vials of your wrath on the stranger, whose article is not supposed to have its origin from a "prominent German physician," but a "Cook's tourist."

I frankly admit that from a three weeks' trip through the centers of the United States nobody can give an exhaustive description of the medical conditions of the country. I therefore gave my article the title of "Traveling Impressions" and expressly declared that I did not want to give a detailed report, but only momentary sketches. Besides, I openly acknowledged that the Americans surpass us in some instances also in medical matters, particularly in the grandeur of hygienic installations and scientific institutes, and even in the editorial it is admitted that my censure about the congress organization in Washington was "entirely deserved." This does not prevent you, however, from attacking me because I did not say about the Rockefeller Institute more than that it has been built at immense expense by a rich man. If you had read my article with more attention, you would have found the acknowledgment in the following sentence, in which I observed that it served scientific studies and contained departments for experimental pathology, physiologic chemistry, bacteriology and comparative anatomy.

You call childlike my admiration of the numerous opportunities for bathing in American hotels. Against this I must protest. I indeed find this arrangement exceedingly hygienic, and can only express my pleasure about the European hotels, which are going ahead in the same way. Imitation is the sincerest flattery. I advise my American medical colleagues to use their influence that this custom may extend in their own country more and more.

Most of all, however, you are indignant at my recommendation of the American remedy against seasickness. You declare it to be impossible that an American doctor, especially a prominent one, would praise such a "humbug" in a scientific publication. I certainly do not understand your sensitiveness on this point. There does really not exist another country in the world which brings out so many "patent medicines" as America. You need only read the numerous advertisements of an American medical journal and you will find quite a number of such medicines. The one I recommended, because I tried it myself, is a "patent medicine" only in its quantitative composition. As already said in my article, it contains potassium bromid, camphor and caffein. On a longer sea-journey seasickness does not play an inconsiderable rôle, as anybody who has had to suffer from it will agree, and I maintain that one has to be grateful for every remedy which delivers one from this unpleasant complication. It having become evident that remedies like validol, veronal, etc., are of no use, we were glad to have found at last a remedy which, though not always, proved efficient in most cases. My own experience thoroughly confirms that of Professor Fuchs of Vienna, who mentioned it first in the *Neue freie Presse.* Our chemists may perhaps succeed in discovering the quantitative composition of this remedy, and we could then give it to our patients in form of a recipe.

It seems to be impossible for the practical American to understand that a German doctor recommends a "patent medicine" only because he had good experiences with it and wants to help all those who have to suffer. I wish that you might recognize that your criticism, as you say yourself, was "hypercritical" and went beyond its limits.

K. JAFFÉ, M.D., Hamburg, Germany.

[COMMENT.—Our correspondent is mistaken in attributing injured feelings to us; we realize that there is no occasion for such feelings. Any one must be implacable indeed who could not forgive a three weeks' tourist his natural misapprehensions with regard to entirely new and unfamiliar phenomena and institutions. If our correspondent will pardon us our perhaps equally natural amusement that he and the *Münchener medizinische Wochenschrift* should have chosen to publish to the world such impressions, we will take the responsibility of absolving him, in our "quality of American," from all blame for injured feelings on this side of the Atlantic. Meanwhile, those who wish to read impressions of America of another character may turn to those of Strauss of Berlin (Reiseeindrücke aus amerikanischen Krankenhäusern, *Deutsch. med. Wchnschr.,* Feb. 13, 1913, p. 323), and von Noorden of Vienna (Amerikanische Reiseeindrücke, *Neue freie Presse,* Vienna, December 6, 7, 1912).

It would take too much space to make clear to our correspondent the difference between our point of view and his. We will try, however, to explain one point which he frankly declares he does not understand, namely, our comment on his recommendation of the nostrum for seasickness in question—the composition of which, by the way, he gives incorrectly—it does not contain bromids. "It seems to be impossible," complains our correspondent, "for the practical American to understand that a German doctor recommends a 'patent medicine' only because he had good experiences with it and wants to help all those who have to suffer." Not at all; we understand Dr. Jaffé's good intentions perfectly. What we do find somewhat strange is the fact that a physician, presumably trained to think cogently with regard to the therapeutic action of drugs, should reason as naïvely as any of the multitude of dupes who give their testimonials for Pain-Killer or Magic Elixir. "I took this wonderful remedy; I ceased to have pain. This proves that it cured me and also that it will cure any one else who will take it." Americans are familiar with such testimonials, but they are not accustomed to seeing the signatures of physicians of standing appended to them.—ED.]

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ARTICLES ON MEDICAL ETHICS

To the Editor:—During the summer I propose to make a study of medical ethics. It would be a great courtesy if you would publish a list of books or articles which would be of help.

P. W. L.

ANSWER.—Following is a list of references on the subject which should prove of service. The list comprises articles or abstracts appearing in THE JOURNAL, and articles appearing in other publications and books.

Division of Fees, Queries and Minor Notes, THE JOURNAL, Dec. 18, 1909, p. 2117.
Lord, J. P.: The Secret Commission Evil, THE JOURNAL, March 11, 1911, p. 725.
The Secret Commission Evil, editorial, THE JOURNAL, March 11, 1911, p. 748.
The Secret Commission Evil, editorial, *Colorado Med.,* February, 1911; reproduced in THE JOURNAL, March 11, 1911, p. 770.
The Secret Commission Evil, Correspondence, THE JOURNAL, March 25, 1911, p. 916; April 1, 1911, p. 987.
The Evils of the Contract System: Report of the Committee Appointed by the Erie County Medical Society to Investigate Unethical Contract Practice, Medical Economics Department, THE JOURNAL, Aug. 19, 1911, p. 674.
Nutt, G. D.: Medical Profession To-Day and Business End of It, *Pennsylvania Med. Jour.,* August, 1911; abstr., THE JOURNAL, Sept. 16, 1911, p. 1009.
Perkins, I. B.: Plan for Uniting Medical Profession in Effort to Maintain Highest Possible Standard of Ethics, *Denver Med. Times,* November, 1911, abstr., THE JOURNAL, Dec. 2, 1911, p. 1868.
Skeel, R. E.: Ethics of Contract Medical Practice and Its Economic Advantage to the Community, *Cleveland Med. Jour.,* November, 1911; abstr., THE JOURNAL, Jan. 6, 1912, p. 65.
Tuckerman, J. E.: Economic Effect of Contract Medical Practice on Medical Profession, *Cleveland Med. Jour.,* November, 1911; abstr., THE JOURNAL, Jan. 6, 1912, p. 65.
Hamann, C. A.: Condition and Control of Contract Medical Practice in Other Cities of the Country, *Cleveland Med. Jour.,* November, 1911; abstr., THE JOURNAL, Jan. 6, 1912, p. 66.
Method of Procedure when Supplanted by Consultant, Queries and Minor Notes, THE JOURNAL, Feb. 3, 1912, p. 364.
Ethics of Accepting a Position on a Church *Dispensary,* Queries and Minor Notes, THE JOURNAL, March 16, 1912, p. 801.
Relation of Consultant to Patient and Attending Physician, Queries and Minor Notes, THE JOURNAL, April 13, 1912, p. 1136.
Principles of Medical Ethics, a Proposed Revision, THE JOURNAL, June 8, 1912, p. 1790. *Adopted by the House of Delegates* June 4, 1912, with slight *modifications noted* in THE JOURNAL, June 15, 1912, p. 1906.
Instruction in Medical Ethics, Paris Letter, THE JOURNAL, June 22, 1912, p. 1957.

Charging a Brother Practitioner for Services, Queries and Minor Notes, The Journal, Aug. 10, 1912, p. 465.
Questions of Usage and Medical Ethics, Queries and Minor Notes, The Journal, Oct. 26, 1912, p. 1560.
Discreditable Remuneration in Contract Practice, Berlin Letter, The Journal, Dec. 14, 1912, p. 2169.
Conference on Contract Practice, Berlin Letter, The Journal, Dec. 28, 1912, p. 2324.
Instruction in Medical Ethics and Economics, Vienna Letter, The Journal, April 12, 1913, p. 1168.
Medical Ethics, by a physician's wife, The Journal, April 26, 1913, p. 1290.
Report of the Judicial Council to the House of Delegates, 1913, treats the subjects of the secret division of fees and contract practice. It appears in the minutes of the House of Delegates on a later page of this issue or else June 28.
Boswell, J. H.: Ethics, *Jour. Kansas Med. Soc.*, May, 1907.
Pinard, A.: Medical Ethics, *Presse méd.*, 1907, xv, No. 7.
Castleman, H. L.: Medical Ethics, *West Virginia Med. Jour.*, October, 1907.
Baum, W. L.: The Medical Profession and the Public, *Illinois Med. Jour.*, July, 1908.
Shattuck, F. C.: Medical Ethics, *Cleveland Med. Jour.*, August, 1908.
Hall, O. B.: Medical Ethics, *Jour. Missouri State Med. Assn.*, November, 1908.
Frost, C. E.: Professional Ethics, *Jour. Oklahoma State Med. Assn.*, February, 1909.
Renaker, J. G.: Medical Ethics, *Kentucky Med. Jour.*, February, 1909.
Potts, F. L.: Medical Ethics, *Jour. South Carolina Med. Assn.*, April, 1909.
Vander Veer, A.: The Ethics of Our Profession, *New York Med. Jour.*, Jan. 30, 1909.
Martin, E. D.: The Doctors and Their Ethics, *New Orleans Med. and Surg. Jour.*, June, 1909.
London, W.: Medical Ethics, *Kentucky Med. Jour.*, July, 1909.
Lawbaugh: The Physician, His Duties and Relation to the Profession, *Jour. Michigan State Med. Soc.*, Detroit, October, 1909.
Willour, L. S.: Medical Ethics, *Jour. Oklahoma State Med. Assn.*, November, 1910.
Hiltner, W. G.: Timely Ethical Problems, *Western Med. Rev.*, February, 1911.
Elder, A. V.: Medical Ethics, *Med. Press and Circular*, Oct. 4, 1911.
Achard, H. J.: The Farce of Medical Ethics, *Chicago Med. Recorder*, Dec. 15, 1911.
Wood, P. R.: Disloyalty to Medical Ethics Responsible for Small Societies, *Jour. Iowa State Med. Soc.*, January, 1912.
Emerson, L.: Ethical Problems Confronting Eye, Ear, Nose and Throat Specialist, *New Jersey Med. Soc. Jour.*, March, 1913.
Anon, M.: Subversion of Medical Ethics, *Denver Med. Times and Utah Med. Jour.*, April, 1912.
Hoeker, R. T.: How Do We and How Should We Treat a Brother Physician? *Kentucky Med. Jour.*, May, 1912.
Furman, D.: Medical Ethics, *Jour. South Carolina Med. Assn.*, July, 1912.
Caraway, M.: Medical Ethics, *Mississippi Med. Month.*, August, 1912.
Kern, B.: The Basic Principles of Ethics, *Deutsch. med. Wchnschr.*, Sept. 5 and 12, 1912.
Surratt, I. W.: Medical Ethics, *Old Dominion Jour. Med. and Surg.*, October, 1912.
Anthony, F. R.: Medical Ethics, *Jour. Missouri State Med. Assn.*, November, 1912.
Dubois, P.: Ethics of Psychology, *Cor.-Bl. f. schweiz. Aerzte*, Dec. 10, 1912.
Roberts, John B.: The Doctor's Duty to the State: Essays on the Public Relations of Physicians, *New York Med. Jour.*, 1904, lxxx.
Saundby: Medical Ethics, Lippincott, price $2.50.
Cathell: The Physician Himself, F. A. Davis Co., 1914 Cherry Street, Philadelphia, price $2.50.

THE SPELLING OF "ANESTHESIA"

To the Editor:—I wish to call your attention to an error in spelling which occurs in the symposium on anesthesia. The word "anaesthesia" is spelled "anesthesia" which means "without garment." To those who understand Greek the error is quite amusing.

Isabella C. Herb, M.D., Chicago.

Answer.—The spelling to which attention is called is not an error. Our correspondent would be quite right if "anesthesia" were a Greek word, but it is as much English as "anesthésie" is French and "anestesia" Italian; and it surely will not be maintained that either of the latter words is misspelled, or that the meaning of either is aught but "without sensation."

In the English language "hwaenne" has become simplified to "when" and "wasshe" to "wash." Why should an adopted word claim an immutable sanctity superior to that accorded to words native to the language? Even those who, like our correspondent, are familiar with the original sources of words, will scarcely, we imagine, insist that "equity" should be spelled "aequity" lest some one should fancy it derived from "equus" instead of "aequus," or that "question" should be spelled "quaestion" lest some careless student should believe it derived from "questio," a complaint, instead of "quaestio," an inquiry. The amusing phase of this spelling controversy—if our correspondent will pardon us for saying so—is, to our mind, the plea that the classical origin of certain English words makes of them a privileged class, exempt from the laws to which more plebeian words must submit—and this although the French, Italian and Spanish cousins of these very linguistic aristocrats submit meekly enough to the laws of the respective languages in which they are naturalized.

PREVENTION OF THE DISSEMINATION OF MEASLES

To the Editor:—Please give the present-day opinions on the following points in regard to measles:

1. Is the disease frequently disseminated by third persons, as doctors, fomites, etc.?
2. How soon after onset does a case of measles cease to be a danger to other children?
3. Should a discharging ear affect the length of the quarantine period?
4. At what period after onset would you recommend fumigation of the sick-room? Do you consider fumigating necessary, as a routine measure, three weeks after onset?

Frederic C. Sharpless, M.D., Rosemont, Pa.

Answer.—1. While possible, this is not a frequent means of dissemination.

2. The period of infectivity is uncertain, but recent experiments on the virus in animals seem to indicate that the infectivity is lost quite early. It is usually estimated that danger exists so long as there is a lesion, such as sore throat, discharging ear or desquamation. Probably this rule would extend quarantine beyond the absolutely necessary period. Three weeks is generally fixed as the limit of quarantine.

3. Yes.

4. Fumigation, if used at all, should not be attempted until the patient is ready for discharge from quarantine. Fumigation is desirable as a routine measure, but greater attention should be given to the condition of the patient as a transmitter of the disease.

ARTICLES ON SEWER-GAS AND ITS EFFECTS

To the Editor:—Please give names of some of the best books or papers on sewer-gas and its effects on the human being. E.V.N.

Answer.—This is a subject on which little seems to have been written of late, possibly because the trend of opinion now is that sewer-gas is less important than was formerly believed. Following are titles of some of the more accessible recent articles:

Winslow, C. E. A.: Conveyance of Bacteria by Sewer-Air, *Am. Jour. Pub. Hyg.*, 1909, xix, 640.
Mead, K. C.: Is Sewer-Gas Detrimental? *Yale Med. Jour.*, 1903, x, 91.
Jacobi, A.: The Production of Diseases by Sewer-Air, *New York Med. Jour.*, 1894, lx, 104, 135.
Fatal Sewer-Air Poisoning, *Lancet*, London, 1898, ii, 1722.
Edgeworth, F. H.: Some Diseases Occurring in Men Who Worked in a Sewer, *Bristol Med.-Chir. Jour.*, 1898, xvi, 33.

TREATMENT OF VICE PROBLEM ABROAD

To the Editor:—In some of my medical journals during the past year or so I saw a report on the manner in which various countries were dealing with the vice problem. I am anxious to find that report again, and cannot.

E. G. Brandenberger, M.D., Evansville, Ind.

Answer.—Our correspondent may refer to one of the articles in the following list:

Bierhoff, F.: Sanitary Control of Prostitution in Some European Cities, *New York Med. Jour.*, Sept. 2 and 28, and Oct. 5, 1912.
Kelly, H. A.: Influence of Segregation on Prostitution and on the Public. Obtainable from Dr. R. W. Willson, 1708 Locust St., Philadelphia.
Forest de, H. P.: Police Methods of Dealing with Prostitution in Germany, *New York State Jour. Med.*, October, 1908.
Bierhoff, F.: Control of Prostitution and Venereal Diseases Abroad, *Am. Jour. Urol.*, July, 1911.

ARTICLES ON FETAL MEMBRANES FOR SKIN-GRAFTING—FORMULA OF CARREL'S SOLUTION

To the Editor:—1. Please refer me to what literature there is on the subject of fetal membranes for skin-grafting.

2. Also kindly give me the formula for Carrel's solution.

D. D. Turnacliff, M.D., St. Paul, Minn.

Answer.—1. The following articles may be referred to:

Sabella, N.: Use of Fetal Membranes in Skin-Grafting, *Med. Rec.*, New York, March 15, 1913; abstr., The Journal, March 29, 1913, p. 1029.
Stern, M.: The Grafting of Preserved Amniotic Membrane to Burned and Ulcerated Surfaces, Substituting Skin-Grafts, The Journal, March 29, 1913, p. 973.

2. A formula of Carrel's solution is given in an article by him in The Journal, Aug. 17, 1912, p. 523.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Capitol, Montgomery, July 8. Sec., Dr. W. H. Sanders, Montgomery.

ARIZONA: Phoenix, July 1. Sec., Dr. John Wix Thomas, National Bank of Arizona Building.

COLORADO: Denver, July 1. Sec., Dr. David A. Strickler, 612 Empire Building.

CONNECTICUT: Regular, City Hall, New Haven, July 8-9. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 8. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, New Haven, July 8. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

DISTRICT OF COLUMBIA: Washington, July 8. Sec., Dr. George C. Ober, 125 B St., S. E.

INDIANA: State House, Indianapolis, July 8-11. Sec., Dr. W. T. Gott, 120 State House.

MASSACHUSETTS: State House, Boston, July 8-10. Sec., Dr. Walter P. Bowers, Room 159, State House.

MONTANA: Senate Chamber, Capitol Bldg., Helena, July 8. (First special examination held aside from regular semi-annual examinations.) Sec., Dr. William C. Riddell, Helena.

NEW HAMPSHIRE: Concord, July 8-9. Regent, Mr. H. C. Morrison, State Library.

NEW MEXICO: Santa Fe, July 14. Sec., Dr. W. E. Kaser, East Las Vegas.

NEW YORK: June 24-27. Chief of the Examinations Division, Harlan H. Horner, Department of Education, Albany.

NORTH DAKOTA: Grand Forks, July 1. Sec., Dr. G. M. Williamson.

OKLAHOMA: Guthrie, July 8-10. Sec., Dr. John W. Duke, Guthrie.

OREGON: Portland, July 1. Sec., Dr. E. B. McDaniel, 704 Electric Building.

PENNSYLVANIA: Harrisburg, Philadelphia and Pittsburgh, June 23-25. Sec., Mr. Nathan C. Schaeffer, Department of Public Instruction, Harrisburg.

RHODE ISLAND: State House, Providence, July 10. Sec., Dr. Gardner T. Swarts, State House.

SOUTH DAKOTA: Capitol Bldg., Pierre, July 8. Sec., Dr. L. G. Hill, Watertown.

TEXAS: Capitol Bldg., Austin, June 24-26. Sec., Dr. W. L. Crosthwait, Suite 1110 Amicable Bldg., Waco.

UTAH: Salt Lake City, July 7-8. Sec., Dr. G. F. Harding, 310 Templeton Building.

VERMONT: Burlington, July 8-11. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 24-27. Sec., Dr. Herbert Old, Norfolk.

WASHINGTON: Stadium High School, July 1-6. Sec., Dr. F. P. Witter, Spokane.

WEST VIRGINIA: Charleston, July 14-16. Sec., Dr. H. A. Barbee, Point Pleasant.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Beffel, 3200 Clybourn Street.

WYOMING: State House, Cheyenne, June 25-27. Sec., Dr. J. B. Tyrrell, Laramie.

Wisconsin January Report

Dr. John M. Beffel, secretary of the Wisconsin State Board of Medical Examiners, reports the written and practical examination held at Milwaukee, Jan. 14-16, 1913. The total number of subjects examined in was 20; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 18, of whom 12 passed, including one osteopath, 2 failed, 3 were conditioned and 1 withdrew. Seventeen candidates were licensed through reciprocity. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
College of Physicians and Surgeons, Chicago	(1911)	75
Rush Medical College	(1897)	78
Hahnemann Medical College and Hospital, Chicago	(1894) 75; (1910) 75.	
Bennett Medical College	(1912)	84
Creighton Medical College	(1912)	82
University of Pennsylvania	(1911)	91
Hahnemann Medical College of Philadelphia	(1912)	79
Marquette University, Medical Department	(1910) 75; (1912) 75, 75.	
FAILED		
Marquette University, Medical Department	(1912)	62, 69
CONDITIONED		
Bennett Medical College, Chicago	(1911)	*75
Indiana University	(1910)	*75
Marquette University, Medical Department	(1912)	†75

*Conditioned in Physical Diagnosis.

†Conditioned in Pathology.

College		Year Grad.	Reciprocity with
LICENSED THROUGH RECIPROCITY			
Rush Medical College	(1904)	(1911)	Illinois
Northwestern University Medical School	(1910)	(1911)	Illinois
Chicago Coll. of Medicine and Surgery	(1909)	(1911)	Illinois
Bennett Medical College		(1906)	Illinois
Hahnemann Medical College and Hospital, Chicago	(1906)	(1910)	Illinois
University of Iowa, College of Medicine		(1888)	Iowa
University of Louisville		(1894)	Kentucky
University of Minnesota, School of Medicine		(1911)	Minnesota
Hamline University		(1904)	N. Dakota
Long Island College Hospital		(1899)	Nevada
Bellevue Hospital Medical College		(1882)	Minnesota
Western Reserve University		(1909)	Ohio
Meharry Medical College		(1912)	Tennessee

Book Notices

ELECTRICITY IN DISEASES OF THE EYE, EAR, NOSE AND THROAT. By W. Franklin Coleman, M.D., M.R.C.S., Professor of Ophthalmology in the Post-Graduate Medical School of Chicago. Cloth. Price, $5. Pp. 595 with 156 illustrations. Lincoln, Ill.: The Courier-Herald Press, 1912.

Part I is devoted to the physics of electricity and electrotherapeutic apparatus. Part II treats of the therapeutic uses of electricity and the technic of its application, including phototherapy and the Roentgen rays. Part III covers the use of electricity in diseases of the eye and describes its application in practically every abnormal condition from blepharitis marginalis to atrophy of the optic nerve, including errors of refraction. The author does not claim to have personally seen benefit from electricity or "electric massage" in cases of error of refraction, but quotes from Dr. S. J. Harris of Boston some astounding statements. For example, in speaking of the effect of such treatment in hyperopia, he says: "Out of two hundred children ranging from 10 to 15 years, having a hypermetropia of .50 to 3.00 D., one hundred of them have been able to go without glasses, fifty of them needed only very weak glasses, and the other fifty required glasses less than half the strength of those they originally wore. In some cases the improvement is immediate, and in others it is not noticed until after the ten sittings. In 40 per cent. of the cases, ranging from 15 to 20 years, no glasses were needed; in 60 per cent., ranging in age from 20 to 50, I was able to reduce the error and prescribe weaker glasses than would have been required before the treatment." Such assertions should be fortified by the reports of cases in which most painstaking examinations have been made, under complete cycloplegia, both before and after treatment. Part IV is devoted to electricity in diseases of the ear, and the balance of the book to diseases of the throat and nose. No one who reads the book can doubt the author's sincerity or his enthusiasm, and he recounts many truly remarkable cures (?); but many of the cases cited are so incompletely reported that they are valueless as evidence. In some of the cases of common diseases of the eye reported as cured by electricity, the patients would ordinarily recover in the same or less time under the usual methods of treatment.

LANG'S GERMAN-ENGLISH DICTIONARY OF TERMS USED IN MEDICINE AND THE ALLIED SCIENCES. Second Edition, Edited and Revised by Milton K. Meyers, M.D., Neurologist to the Jewish Hospital Dispensary, Philadelphia. Cloth. Price, $5 net. Pp. 561. Philadelphia: P. Blakiston's Son & Co., 1913.

This dictionary is printed with large and convenient type and classification, but some of the definitions, although they convey the idea, have a distinctly foreign flavor which might sound odd if used in an English article. The additions noted in the new edition are free from this objection. The scientist will miss some words he hopes to find there; *Hirnblutleiter*, for instance, is not given although it occurs in a title in a current medical exchange; *Unterbinden* is defined as "to ligature." The term "lymph-node" does not seem to be used, *Drüsen* being translated "gland" throughout. A few typographic errors, such as "Towara" for "Tawara" are excusable, but the word *Soda* might have meen translated otherwise than by "soda" as the German term is applied to washing-soda while the English term is used often more indiscriminately. The dictionary also enriches the English language with the term "squeeze-preparation," which is the definition of *Klatchpräparat*, generally translated as "impression specimens."

The second edition is a great improvement over the first, but even with its handsome print and convenient size, 6 by 9½ inches, the dictionary is a little disappointing. What the scientist wants is the exact definition, not just "soda"; he can find that in any schoolboy's German dictionary.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Archives of Internal Medicine, Chicago

May, XI, No. 5, pp. 469-563

1 *Relation of Gastric and Duodenal Ulcer to Vascular Lesions. W. Ophüls, San Francisco.
2 *Effect of Change of Posture—Without Active Muscular Exertion—on Arterial and Venous Pressures. J. H. Barach and W. L. Marks, Pittsburgh.
3 *Budding and Other Forms in Trophozoites of Entamoeba Tetragena Simulating Spore Cyst Forms Attributed to Entamoeba Histolytica. S. T. Darling, Ancon, Canal Zone.
4 Active Hyperemia following Local Exposure to Cold. A. W. Hewlett, Ann Arbor.
5 *Modified Wassermann. L. O. Thompson, Little Rock, Ark.
6 *Study of Therapeutic Value of Theobromin Sodium Salicylate in Acute Experimental Nephritis. H. A. Christian and J. P. O'Hare, Boston.
7 Case of Infantilism Associated with Hypophysis Tumor. E. J. Mullally, Montreal.
8 Case of Myxedema, with Recovery, and Seven Years' After-Care Notes. E. N. Brush and W. B. Cornell, Baltimore.
9 *"Giant-Cell Pneumonia." H. T. Karsner and A. E. Meyers, Boston.
10 *Determination of Diastolic Pressure in Aortic Regurgitation. A. E. Taussig and J. E. Cook, St. Louis.
11 *Clinical Investigation of Carbonic Acid in Alveolar Air. E. G. Grey, Boston, and A. D. Hirschfelder, Baltimore.

1. **Gastric and Duodenal Ulcer and Vascular Lesions.**—The most common type of gastric (or duodenal) ulcer, in material obtained by Ophüls by necropsy was the arteriosclerotic ulcer in persons over 30 years of age. There is, he says, a second class of gastric (or duodenal) ulcer, in the young, which is probably due to local endarteritis (thrombo-arteritis?). In addition to these, one occasionally observes acute embolic (or thrombotic) ulcers.

2. **Effect of Change of Posture on Arterial and Venous Pressures.**—When the element of mucular effort has been eliminated, the authors found that change of bodily posture from the erect to the horizontal will cause an increase in the maximum pressure, a decrease in the minimum pressure and an increase in the pulse pressure. After five minutes in the horizontal posture when the subject is retilted to the erect posture, the maximum pressure will diminish, the minimum pressure increase and the pulse pressure diminish. It will be noted that in both instances the pulse pressure follows the same trend as the maximum pressure. Change of posture from the erect to horizontal caused a fall in the venous pressure. Change of posture from the horizontal to erect caused an increase of the venous pressure.

3. **Budding and Other Forms in Trophozoites of Entamoeba Tetragena.**—The descriptions of the life cycle of *E. histolytica* by Schaudinn and Craig, in Darlings' opinion, therefore, are in all likelihood those of a spurious species, having resulted from observations of pathologic changes in senile races of *E. tetragena.*

5. **Modified Wassermann.**—Thompson makes use of antihuman amboceptor and a 10 per cent. solution of fresh guinea-pig serum for complement. Alcoholic extract of liver from a syphilitic fetus is used for antigen.

6. **Therapeutic Value of Diuretin in Acute Experimental Nephritis.**—The authors found that diuretin given to rabbits with a severe, fatal exeprimental nephritis, shortens the duration of life of these animals. On the other hand, nine out of twelve rabbits which survived the experiment had received diuretin. This work supports the view that in a severe acute nephritis a diuretic drug, such as diuretin is contra-indicated inasmuch as in the experiments diuretin shortens the lives of the animals. On the other hand, of the survivors a large proportion (three-fourths) had received diuretin. This rather gives support to the view that in less severe cases diuretin may be beneficial and so justifies the cautious use of the drug in moderately severe cases of acute nephritis. In the survivors it is not certain that acute severe renal lesions were produced; consequently deductions from these relatively few survivors are of less value than from the larger number dying during the experiments. Of course, it is realized in making deductions such as the above that they may not be applicable directly to conditions in the human being, for due allowance must be made for the many differences between man and the lower animals. The authors experiments support the view that diuretin as a diuretic drug may be harmful in a case of acute nephritis.

9. **Giant-Cell Pneumonia.**—The case studied by Karsner and Meyers was one of bronchopneumonia of the desquamative type and was associated with an early stage of bronchiolitis obliterans. The authors see no good reason for assigning to the so-called "giant-cell pneumonia" the dignity of classification as a pathologic or clinical entity. The giant-cell formation may occur following a wide variety of causes and is not characteristic of the pneumonias following only measles and pertussis. The giant-cells are almost entirely the product of fusion of alveolar epithelium and present a wide variety of morphologic characters, depending on the line of section. There is no positive evidence for believing that these cells functionate as phagocytes.

10. **Diastolic Pressure in Aortic Regurgitation.**—Taussig and Cook state that with the auscultatory method the beginning of the fourth phase, that is, the dulling of the arterial sound, marks the diastolic pressure. Since this point can readily be made out in aortic regurgitation, the auscultatory method is as applicable to this condition as to any other. The persistent arterial sound is not pathognomonic of aortic regurgitation, being often absent in this disease and occasionally present in other conditions. In cases with very low pulse-pressure, in those with marked dyspnea and in Cheyne-Stokes breathing, the auscultatory method is especially valuable, being often distinctly superior to the graphic method.

11. **Carbonic Acid in Alveolar Air.**—The object of this study was first, to determine if possible whether the feeling of asthenia in convalescent patients and especially in patients who have gotten out of bed for the first time, is associated with the presence of acapnia. Second, whether the latter phenomenon is responsible for these symptoms in patients with enteroptosis. Third, the extent to which acapnia develops in cardiac dyspnea, and its relation to the mechanism of the latter. It appeared that in cardiac disease there are two distinct mechanisms for the production of dyspnea: (1) Stasis and congestion in the pulmonary area, associated with difficulty in aeration of the blood. This may act either by reflex stimulation of the vagus endings in the lung or by increasing the CO_2 in the blood bathing the respiratory center which will give rise to hyperpnea until the CO_2 falls to its normal level. (2) Slow arterial circulation through the medulla, as in arteriosclerosis, aortic insufficiency and general failure of the circulation, which gives rise to symptoms of lack of oxygen in the latter and the formation of acids there quite independent of the CO_2. This acid intoxication overstimulates the respiration and gives rise to over-ventilation of the lungs, acapnia, and probably sometimes Cheyne-Stokes breathing, for Pembrey and his collaborators have shown that the latter can be stopped by inhalations of CO_2. It is probable that such cases can be benefited by rebreathing, but we have not been able to answer this question as yet.

They had one patient with Adams-Stokes disease with complete heart-block, who was not having any attacks of dyspnea at the time of determinations, whose alveolar CO_2 was normal.

A number of observations were made on pregnant women near term who had slight dyspnea, most of whom were a little below the lower limits of normal, which might be easily accounted for on purely mechanical grounds, though the possibility of a mild acidosis such as has been assumed by Porges and his collaborators cannot be excluded.

Boston Medical and Surgical Journal

June 5, CLXVIII, No. 23, pp. 825-864

12 *Studies in Bacterial Metabolism: Relation of Bacterial Metabolism to Internal Medicine. A. R. Kendall, Chicago.

13 *Common Colds and Vaccine Therapy. J. W. Fisher, Middletown, Conn.
14 *Etiologic Factor in Carcinoma and Its Possible Influence on Treatment. H. W. Nowell, Boston.
15 Neglect of Hydrotherapy in America. J. H. Pratt, Boston.
16 Appendix Excisor. J. E. Briggs, Boston.

12. **Bacterial Metabolism and Internal Medicine.**—Evidence both qualitative and quantitative, is presented by Kendall, illustrative of the nature and extent to which utilizable carbohydrate spares protein and protein derivitives from bacterial attack. The carbohydrate protects protein largely from bacterial break down.

The sparing action is not complete, but it results in the practical elimination of nitrogenous products, incidental to bacterial development, some of which may be toxic, and the substitution for them of substances which are non-nitrogenous, which may be irritative, but probably never truly toxic. This evidence has been introduced here chiefly to indicate how the principle involved may be made use of theoretically in the treatment of diseases of bacterial origin, where the anatomic features of the disease are such as to permit the utilization of carbohydrate by the invading micro-organisms. The object of the diet rich in carbohydrate is twofold: physiologically to provide the patient with a readily assimilable food requiring a minimal amount of digestive energy to prepare it for the tissue needs, and bacteriologically to shift bacterial metabolism from the destruction of body tissue for their food requirements to the utilization of carbohydrate for at least the major part of their dietary needs. This does not directly result in annihilation of the invading bacteria, but it certainly approaches their metabolic reformation. The shifting of metabolism to sugars appears to deprive these microbes of one of their most potent weapons of offense, and forces them to act on the defensive; forcing the parasite to act on the defensive theoretically at least permits the host to rally and to strengthen its defensive and even its offensive powers earlier in the battle. The initial damage, brought about when the host is temporarily overwhelmed by the initial onslaught of the invaders (which is accomplished largely during the incubation period of the disease) cannot be estimated at present, and perhaps cannot be undone. The final struggle between host and parasite can be influenced directly, and favorably.

13. **Common Colds and Vaccine Therapy.**—Fisher is convinced that colds, so-called, are unquestionably due to infection by micro-organisms and therefore are contagious. They can largely be prevented by reasonable isolation of every case, and preventive inoculation. They can be aborted or their course shortened by vaccine treatment; in fact, the treatment of acute and chronic inflammation of the respiratory tract by vaccines is specific.

14. **Etiologic Factor in Carcinoma.**—Nowell summarizes his paper as follows: A procedure has been developed whereby a substance or substances may be isolated from carcinomas, the method precluding the presence of organic life in the end product. This end product has been shown to be of a highly toxic character. The peritoneal exudate produced by a fatal intoxication is far more toxic than the original substance. The tumor substance has been shown to possess not only a general but also a specific toxicity, since on injection into rabbits in doses of less than lethal amount it will produce well-defined, well-characterized, carcinomas, the site of the primary lesion being different from and independent of that of the injection. The appearance of the primary lesion is followed by the development of numerous metastatic foci in different parts of the body, while the characteristic cachexia manifests itself. The poisonous tumor preparation has been shown to be characteristic of carcinomas. By the repeated injection of very small doses a large number of rabbits have been immunized. The serum from the animals thus immunized possesses the power of antagonizing the toxic action of the tumor substance. This has been demonstrated by injections of the serum either previous to or simultaneous with that of the tumor poison. In both events no effect is observed from quantities of the poison which, if injected alone, would produce a rapidly fatal intoxication. With the simultaneous injection of poison and antibody it has been shown that one part of the latter will effectually antagonize ninety-nine parts of the former.

Bulletin of American Academy of Medicine, Easton, Pa.

June, XIV, No. 3, pp. 186-244

17 Immigration of Tuberculous into United States: Problem for Every Nation. S. A. Knopf, New York.
18 Immigration and Midwife Problem. I. S. Wile, New York.
19 Trachoma in Modern Immigrant, and Its Dangers to America. C. P. Franklin, Philadelphia.
20 Desirability of Teaching Preventive Medicine in Higher Institutions of Learning. H. B. Hemenway, Evanston, Ill.
21 Open-Air Schools. T. W. Grayson, Pittsburgh.
22 Medical Inspection of Schools. E. W. Goodenough, Waterbury, Conn.
23 The Well-Fed Child. A. L. Benedict, Buffalo.
24 Teaching of First Aid in Schools. C. A. Kinch, New York.

Bulletin of Johns Hopkins Hospital, Baltimore

June, XXIV, No. 268, pp. 167-198

25 Specialism in General Hospital. W. Osler, Baltimore.
26 Some Modern Problems in Nutrition. F. Knoop, Freiburg, Germany.
27 Wassermann Reaction in Johns Hopkins Hospital. R. H. Major, Baltimore.
28 *Excessive Thickening of Thiersch Grafts Caused by Component of Scarlet Red (Amidoazotoluol). J. S. Davis, Baltimore.
29 Subsequent History of One Thousand Patients Who Received Tuberculin Tests. J. Gelien and L. Hamman, Baltimore.
30 *Influence of Contents of Pulmonary Artery on Experimental Pulmonary Tuberculosis. W. C. White, Pittsburgh.
31 Physician's Opportunity in Preventive Medicine. J. B. Hawes, Boston.

28. **Excessive Thickening of Thiersch Grafts.**—In a case of extensive ulcer of the arm following a burn the granulations of the wound were brought into healthy condition by irrigations, free use of nitrate of silver, balsam of Peru, curved scissors, etc. At the same time very marked progress was also made toward healing by stimulating the wound edges with 4 per cent. amidoazotoluol ointment, alternating every twenty-four to forty-eight hours with zinc oxid or boric ointment. A number of large thin Thiersch grafts were buttonholed and applied over a large part of the unhealed area. Rubber impregnated mesh was placed snugly over the grafts, and over this overlapping strips of protective, dry gauze and a bandage. Four per cent. amidoazotoluol ointment on old linen was laid over the rubber mesh. This dressing was alternated with boric ointment every twenty-four hours. After two weeks the greater portion of the grafts had taken. There had been a remarkable gradual thickening of all the grafts. The surface was smooth but rather uneven, and of a bluish grey color. The appearance was that of an edematous epithelial mass. The thickness varied between 1/8 and 3/8 of an inch. Davis felt convinced from his experience with occasional overgrowths of wound edges and other grafts caused by the organic coloring matters, that this thickening would begin to subside as soon as the stimulants should be removed. The thickened grafts were dressed with stearate of zinc powder and exposed to the air, in order to promote drying. The amidoazotoluol was discontinued. There was no excessive thickening of the wound edges. Six months later the arm was covered with a stable, movable skin, which was heavily pigmented. On careful examination one or two small thickened areas could be found on the inner side of the arm. There were also several comedo-like masses which filled minute pockets in the skin. The patient has been under observation for over two years and a half since his discharge from the hospital, and there is no sign of malignant degeneration anywhere.

30. **Influence of Contents of Pulmonary Artery on Experimental Pulmonary Tuberculosis.**—White is convinced that there is some close relation between the content of the fats and split fat substances in the pulmonary stream and the severity of experimental pulmonary tuberculous lesions. Increasing the percentage of carbohydrate content of the pulmonary stream by the influence of extracts of the suprarenal gland, has no influence on experimental pulmonay tubercula-

sis. The inhalation of such fat solvents as ether, continued over long periods of time, has no direct influence on experimental pulmonary tuberculosis.

Journal of Medical Research, Boston

May, XXIII, No. 1, pp. 1-234

32 *Endothelioma of Lymph Nodes. J. Ewing, New York.
33 *Typhoid-Like Disease in Rabbits Caused by Bacillus Suipestieus, with Particular Reference to Clinical Course and Prophylactic Vaccination. T. Ordway, E. Kellert and F. P. Huested, Albany.
34 Persistence of B. Abortus, Bang, in Tissues of Inoculated Animals. M. Fabyan, Boston.
35 Presence of B. Abortus in Cow's Milk. M. Fabyan, Boston.
36 *Biology of Tubercle Bacillus. T. Smith, Boston.
37 *Infection in Pulmonary Tuberculosis. O. T. Avery and H. W. Lyall, Brooklyn.
38 Experimental Agglutinative and Hemolytic Transfusions. R. Ottenberg, D. J. Kaliski and S. S. Friedman, New York.
39 *Leprosy Bacillus: Its Cultivation and Differentiation from Other Acid-Fast Species. C. W. Duval and W. H. Harris, New Orleans.
46 Experimental Production of Pernicious Anemia in Rabbits. H. M. Adler, Boston.
41 Glomerular Lesions in Acute Experimental (Uranium) Nephritis in Rabbit. H. A. Christian and J. P. O'Hare, Boston.

32. **Endothelioma of Lymph-Nodes.**—Extreme grades of endothelial hyperplasia, Ewing claims, are not infrequently associated with and dependent on granulomatous infection of lymph-nodes, and these cases demonstrate the capacity of endothelium to respond to inflammatory irritation with extensive proliferation. In some cases it is difficult or impossible to determine whether this overgrowth is simply inflammatory or independent of the irritant, autonomous and neoplastic. The long continued effects of a granulomatous infection may lead to neoplastic growth of lymphatic endothelium, and in the course of a granulomatous infection of lymph-nodes, after repeated operations, the granulomatous element may be eliminated and the disease progress as a form of neoplasm. Granulomatous infection of lymph-nodes may very early give rise to excessive overgrowth of endothelium of distinctly anaplastic type, and with local aggressive properties. Such malignant endotheliomas may arise without any evidences of an associated granuloma. It is possible to conceive that an original infectious focus may be overgrown and obscured by the neoplastic cells. No definite evidence of such an event has been secured, but it has been shown that one node of a chain may exhibit purely neoplastic overgrowth while others show chiefly granuloma. Certain endotheliomas of lymph-nodes designated as diffuse, plexiform, perivascular or alveolar, are probably derived from the endothelium of lymph sinuses and lymph cords. Certain primary tumors of lymph-nodes, with or without associated granuloma, are probably derived from the reticulum cells of the follicles. These tumors resemble lymphosarcoma with large cells, and may be distinguished from tumors of small lymphocytes. Endothelioma or lymph-nodes differ from other neoplasms in several particulars and may be regarded as a disease sui generis, although, nevertheless, essentially neoplastic.

36. **Biology of Tubercle Bacillus.**—Smith states that tubercle bacilli of both human and bovine type, when kept in fully developed cultures at 40 to 50 F. may remain infectious to guinea-pigs for from seven to nineteen months. The number of bacilli surviving in such cultures is relatively small. Many tubercle bacilli from easily cultivated strains which fail to multiply on fresh culture media will multiply in guinea-pigs. In one of the experiments one-fifteen-hundredth of the mass which failed to grow on glycerin agar was still capable of producing generalized tuberculosis. Of the two strains tested side by side the bovine was more resistant than the human strain. This may be in part accounted for by the fact that the human type produces much more acid in 5 per cent. glycerin bouillon than the bovine type after two to four weeks of growth. It may also be due to a greater inherent resistance of the bovine type. In all experimental studies bearing on the behavior and fate of tubercle bacilli in the animal body. Smith says, the character of the culture must be taken into account and its history should be known before arriving at any definite conclusions.

37. **Secondary Infection in Pulmonary Tuberculosis.**—The sputum in five cases of bronchiectasis and fifteen cases of pulmonary tuberculosis, in Stages 1, 2 and 3, was washed by the Saranac Laboratory modification of the Kitasato method and the organisms present isolated and identified. The flora found differs little from that reported by Hastings and Niles in a series of cases of non-tuberculous diseases of the respiratory tract; and from the findings it is difficult to draw inferences concerning their clinical significance. Blood-cultures were made on five cases of bronchiectasis, seven incipient, sixty-five moderately advanced, and thirty-eight far advanced (including eight terminal) cases of pulmonary tuberculosis. In no case was the presence of a secondary bacteriemia demonstrated.

39. **Leprosy Bacillus.**—The acid-fast bacillus known in the human leprous lesion as the Hansen organism can be cultivated *in vitro* under special nutritive conditions. The initial multiplication away from the tissues of the host occurs in the presence of the split-products of animal protein. Although it is reasonable to expect that the sub-culture will in time adapt itself to grow on other food-stuffs, so far all attempts in this direction have been unsuccessful. Cultivation experiments indicate that the leprosy organism is unable to attack the whole protein, which would account for the failure of different investigators to propagate the bacillus on the ordinary laboratory media. The readiness with which the Hansen bacillus multiplies in excised pieces of leprous nodules that have been hydrolized or have undergone autolysis and its inability to grow in the unaltered tissue, or in any medium which does not contain the amino-acids, support this hypothesis.

In the experience of the authors, growth of *B. leprae* is extremely slow even under the most favorable artificial conditions, requiring from eight to ten weeks to attain its maximum, at which time it is only comparable in amount to the growth of *B. influenzae*. The accumulation of the leprosy growth from week to week, which is so characteristic of other acid-fast species, apparently does not occur with the Hansen bacillus. The most efficient method for obtaining the initial growth of *B. leprae* is to transfer bits of the leprous nodule to slanted 1 per cent. alkaline nutrient agar and seed with some one of the proteolytic non-spore-bearing bacteria, which in the course of ten days to two weeks at 37 C. digest the protein sufficiently to cause the contained Hansen rods to multiply. It is essential to have the medium alkaline in order to inhibit too profuse a growth of the hydrolizing organism. In the softened tissue the Hansen bacilli increase steadily and continue to do so in transplants to other media as long as the dissociate products of the host tissue lasts. The organism used to hydrolize the tissue is subsequently eliminated by heating the culture at 60 C. for thirty minutes (Clegg's method) which does not affect the viability of the Hansen rods. While multiplication takes place readily in the digested host tissue, growth ceases on other nutrients unless there is added the intermediate products of protein digestion such as the filtered autolized liver, blood-serum, placenta, etc..

Comparative biologic studies indicate that the Clegg type of leprosy organism is closely related to the moist growing pigment-producing group of acid-fast saprophytes, while the Levy and Kedrowski cultures, which are apparently the same, correspond in some respects to avian tubercle and in others to Moeller's smegma bacillus. The Rost and Williams' culture is identical with Grassburger's acid-fast saprophyte, while Karlinski's culture is not to be distinguished from Rabinowitch's butter bacillus. The serum of rabbits immunized against repeated doses of the Hansen bacilli obtained directly from the uncontaminated human leprous nodule reacts significantly with the "slow-growing" acid-fast culture (Duval), and gives no specific reaction with any of the other so-called lepra cultures.

The experimentally induced lesion affords no reliable means of differentiating acid-fast species other than the tubercle family, since the lesion in all instances has the same general gross appearance. Furthermore, it is not possible to establish an etiologic part for any culture isolated from the human leper on the microscopic character of the experimentally induced lesion since the identical picture may be produced with cultures of timothy hay, butter, milk and smegma bacilli. The specific organism of human leprosy whether *in vitro* or *in vivo* is distinctly acid-fast, which feature is as constant for this species as it is for *B. tuberculosis*. Differences in size and shape of individual bacilli are frequently noted in the same culture; however, these morphologic variations, which are often striking in their resemblance to certain forms of the diphtheria group, may be regarded simply as involution types. Non-acid-fast streptothrical and filamentous forms, which have been described as "stages" of the Hansen organism by Kedrowski and others, have not been noted for any culture isolated by the authors. The specific microorganism of human leprosy is undoubtedly a schizomycete, *genus bacillus*, and not a trichomycete, *genus streptothrix*, any more so than the tubercle bacillus.

Medical Record, New York

June 7, LVIII, No. 23, pp. 1013-1058

42 *Prophylactic and Therapeutic Value of Fresh Air in Schools and Hospitals, Including Heliotherapy. J. W. Brannan, New York.
43 The "Rob." (Syphilis Specific.) J. B. Stein, New York.
44 Acid Test in Therapeutics. J. Aulde, Philadelphia.
45 Personal Experiences with Friedmann Treatment of Tuberculosis. G. Mannheimer, New York.
46 Relation of Syphilis to Progressive Muscular Dystrophy. W. B. Cadwalader and E. P. Corson-White, Philadelphia.
47 New Contagious Gangrene in White Rats. L. K. Hirshberg, Baltimore.

42. Value of Fresh Air in Schools and Hospitals.—Brannan urges that not only patients with pulmonary tuberculosis or with surgical tuberculosis should live in the open air, but that all patients, whatever their disease may be, and all school children, whether predisposed to tuberculosis or not, shall be placed in an atmosphere approximately the same as that out of doors. He reviews what has been done in this direction by various institutions. At Bellevue Hospital, for instance, every ward has at least one balcony attached to it, so that every patient, whatever his disease, may have the benefit of the outdoor air which in the past has been thought necessary only for tuberculous patients. In addition to the balconies there are large wide loggias and extensive lawns and roof gardens at all the hospitals but one. Gradually storm sashes and louvre windows are being added to the balconies so that even in the winter the patients can be moved out of doors, one or more sides of the balconies being always open for the free entrance of the outer air.

The effect of open air on the acute insane is very beneficial, especially in the excited and restless. It has a quieting influence and induces sleep. The same is true of the alcoholic patients. The fresh air and oxygen seem to furnish the stimulation which they greatly need, so that they eat and sleep well. The tremulousness and anorexia and mental depression disappear very quickly. In functional nervous diseases the value of the open air treatment is generally recognized. It induces sleep, improves the appetite, and supplies the general stimulation which patients of that class require. Patients after severe operations gain rapidly when taken out of doors. In critical cases the stimulus of the fresh air often seems to turn the tide.

New York Medical Journal

June 7, XCVII, No. 23, pp. 1165-1216

48 Unconscious Factors in Neuroses. A. A. Brill, New York.
49 Two Cases of Gall-Stones Producing Pyloric and Jejunal Obstruction. W. W. Babcock, Philadelphia.
50 Changes in Treatment of Syphilis. W. S. Gottheil, New York.
51 Quantitative Chemical Reaction for Control of Positive Wassermann Results. D M. Kaplan, New York.
52 Problem in Local Recurrent Breast Cancer. C. W. Stroebell, Rutland, Vt.
53 Case of Meningomyelocele; Anencephalus; Ablation of Placenta. F. M. Myers, Mt. Vernon, N. Y.
54 Treatment of Endometritis. G. G. Ward, New York.
55 Measles: Periodic Cycles of Virulence. H. A. Brown, Washington, D. C.
56 Deleterious Effects of Salvarsan from Otologic Standpoint. A. Kahn, New York.
57 Use of Metranoikter in Treatment of Dysmenorrhea and Sterility. P. F. Williams, Philadelphia.

Old Dominion Journal of Medicine and Surgery, Richmond

May, XVI, No. 5, pp. 213-258

58 How Far Have We Got with Clinical Use of Internal Secretions? W. N. Berkeley, New York.
59 Diagnosis of Delirium Caused by Drugs. L. Casamajor, New York.
60 Allotment of Renal and Ureteral Stones in Shadow Diagram of Body. H. A. Kelly, Baltimore.
61 Etiologic Factor in Gall-Bladder Disease. S. S. Gale, Roanoke, Va.
62 Sliding Rectum in Cure of Various Defects. C. R. Robins, Richmond, Va.

Pennsylvania Medical Journal, Athens

May, XVI, No. 8, pp. 595-678

63 Some Phases of Insanity Problem. J. H. W. Rhein, Philadelphia.
64 *Bacteriology of Catarrh and Common "Colds." A. P. Hitchens, Glenolden.
65 Hypopyon Ulcer of Cornea and Its Treatment. C. M. Harris, Johnstown.
66 Value of Pyelography in Diagnosis of Surgical Diseases of Kidney. F. E. Keene, Philadelphia.
67 Benign Pyloric Stenosis. L. J. Hammond, Philadelphia.
68 Diagnosis and Treatment of Gastric and Duodenal Ulcers. S. D. Molyneux, Sayre.
69 *Early Diagnosis of Cancer of Stomach. J. H. Musser, Philadelphia.
70 *Surgical Aspects of Epigastric Pain. J. H. Jopson, Philadelphia.
71 Few Points in Visceral Ptosis. W. S. Newcomet, Philadelphia.
72 Streptococcic Infection of Both Eyes. F. W. Frankhauser, Reading.

64. Abstracted in The Journal, Oct. 19, 1912, p. 1479.

69 and 70. Abstracted in The Journal, Nov. 16, 1912, pp. 1815 and 1816.

South Carolina Medical Association Journal, Seneca

May, IX, No. 5, pp. 107-187

73 Maritime Quarantine. R. L. Wilson, Charleston.
74 Work of Laboratory of State Board of Health. F. A. Coward, Columbia.
75 School Sanitation. L. R. H. Gantt, Spartanburg.
76 Home Sanitation. W. Egleston, Hartsville.
77 Relation of Domestic Animals to Public Health. G. M. Mood, Charleston.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 17, I, No. 2733, pp. 1037-1092

1 *Internal Secretions in Relation to Dermatology. N. Morris.
2 Some Points in Early Diagnosis of Cancer of Stomach. T. J. Horder.
3 Instance of Large Ureteral Calculus and Some Other Cases of Calculi. G. Wherry.
4 Treatment of Congenital Dislocation of Hip. A. S. B. Bankart.
5 Four Cases of Parotid Tumor. A. Street.
6 Chronic Arthritis: Therapeutic Evidence of Incidence of Streptococcal Infection. D. W. C. Jones.
7 Sequel of Case of Cardiolysis. R. Simon.
8 Analysis of Series of Cases of Hypertension and Hypotension Treated at Vittel. H. J. Johnston-Lavis.
9 Roentgenotherapy of Diseases of Palm. H. Davis.

May 24, No. 2734, pp. 1093-1144

10 Treatment of Pernicious Anemia. B. Bramwell.
11 Six Cases of Acute Perforation of Gall-Bladder. L. R. Braithwaite.
12 Incidence of Ophthalmia Neonatorum in London. N. B. Marman.
13 *Preliminary Note on Experimental Investigation of Concussion of Spinal Cord and Allied Conditions. A. Newton.
14 Pseudo-Fractures of Transverse Processes. O. L. Rhys.
15 Tetanus Treated with Intraspinal Injections of Magnesium Sulphate. H. L. Tidy.
16 Cesarean Section, with Special Reference to Rarer Indications for Operations. W. H. Maxwell.

1. Internal Secretions in Relation to Dermatology.—The influence which the thyroid, the pituitary, the thymus and other glands exert on metabolism and growth, and so on the nutrition of the integument and its appendages, suggests to Morris that further knowledge of their nature and functions will help to solve some of the many perplexing problems of dermatology. Bacteriology has accounted for not a few skin diseases, and vaccine therapy and serotherapy have now a recognized place in dermatologic therapeutics; but there is still a disconcertingly long list of skin affections of which the cause is unknown and the treatment purely empirical. May it not be, he asks, that of some of these the explanation will be found in overaction or underaction of glands that form secretions at once so potent and so difficult of analysis? The fact that animals from which the hypophysis has been partially removed betray diminished power of resistance to infections, and that pituitary hyperplasia has been found associated with bacterial intoxications, may possibly prove to be charged with significance. It is conceivable that irregularity of this or of other organs of internal secretion may be the direct cause of certain obscure skin diseases, and that in others it may induce the predisposing condition which is the opportunity of bacterial or other pathologic influences. Thus, too, may possibly be explained the tendency of so many skin affections to recur after the lesions have disappeared under empirical treatment. Morris thinks that the results yielded by organotherapy in a considerable number of skin affections are sufficient to warrant a more extensive use of this method of treatment in dermatology.

13. Concussion of Spinal Cord.—Experiments were performed by Newton on fifty animals—three monkeys, eight dogs and thirty-nine cats. The spinal cord was exposed by a laminectomy between the fourth and eighth dorsal vertebrae, but the dura was not opened except in two cases of slight compression, for two and five minutes respectively. The provisional conclusions drawn by Newton from his experiments are as follows: 1. The spinal cord is extremely sensitive to slight degrees of concussion and compression. 2. Despite the slight anatomic changes demonstrable after lesser degrees of injury, the resulting disturbance of function is considerable. 3. After concussion which has quite abolished motor efferent conduction, sensory conduction can still be demonstrated. 4. Arrest of the spinal cord circulation by aortic compression abolishes spinal cord function in from fifteen to thirty seconds. 5. These experiments support the view that there is an organic basis for the signs and symptoms of "railway spine" and allied conditions of traumatic neurasthenia.

Lancet, London

May 17, I, No. 4681, pp. 1363-1434

17 *Some Points in Determining Signification of Albuminuria in Pregnancy. H. Williamson.
18 Alimentary Toxemia. J. F. Goodhart.
19 Influence of Chronic Sepsis on Eye Disease. W. Lang.
20 *Relationship of Thyroid to Alimentary Toxemia. F. Langmead.
21 Indications of Nerve Lesion in Certain Pathologic Conditions of Blood-Vessels. T. W. Todd.
22 Abnormal Intra-Abdominal Developmental Adhesions. H. M. W. Gray and W. Anderson.
23 Chloretone Overdosage. W. E. Wynter.
24 *Bacteriology of Cholera. J. A. Turner.
25 *Etiology of Rheumatoid Arthritis. H. W. Crowe.
26 Use of Vaccines in Treatment of Rheumatoid Arthritis. A. B. Soltau.
27 *Case of Volkmann's Ischemic Contracture of Hand. G. De Swietochowski.
28 Case of Gonorrheal Warts on Face Successfully Treated by Vaccine. W. E. M. Armstrong.

May 24, No. 4682, pp. 1435-1506

29 Electrical Action of Human Heart. A. D. Waller.
30 Alimentary Toxemia. W. H. White.
31 Growths in Gall-Bladder and in Bile Ducts. S. Phillips.
32 Dangers and Complications of Salvarsan Treatment. H. W. Bayly.
33 Case of Phthisis with Complete Cavitation of Left Lung. D. W. Carmalt-Jones and E. S. Worrall.
34 *Method of Counting Bacteria in Water. R. Donald.
35 Case of Facio-Hypoglossal Anastomosis. E. C. Bevers.

17. Albuminuria in Pregnancy.—In fifty cases of normal pregnancy, Williamson found neither acetone nor diacetic acid. The cases of chronic nephritis in pregnant women were examined; in ten both these bodies were absent, in five both were present. The urine from twenty patients with chronic nephritis in the non-gravid was examined; two of the patients had previously had uremic convulsions; in none of these twenty cases were either acetone or diacetic acid discovered. Williamson believes that a condition of acidosis is found constantly in cases of pregnancy toxemia when the lesions are of a certain grade of severity, and is not found in cases of chronic nephritis even when the symptoms are severe; and, further, that the onset of an acidosis in the course of a chronic nephritis in pregnancy may be interpreted to mean that toxemia has been added to the existing lesions. In a number of early cases Williamson could find no evidence of acidosis, and in several instances where the symptoms passed away under treatment the ammonia-urea coefficients remained normal, and acetone and diacetic acid were never demonstrated in the urine.

For the detection of acetone a modification of Rothera's test was employed: 5 c.c. of urine are shaken up in a test-tube with ammonium sulphate until saturated, 0.5 c.c. of strong ammonia added, and then three or four drops of a freshly prepared solution of sodium nitro-prusside; if acetone be present a beautiful purple color is produced. The presence of diacetic acid was demonstrated by the well-known ferric chlorid test.

Williamson does not believe that the symptoms are due to the acidosis; indeed, these results definitely disprove this theory, because the symptoms are often present in a mild form before one can find any evidence of acidosis, but the results of treatment have convinced Williamson that if the acidosis is diminished the severity of the symptoms is alleviated. In severe cases of eclampsia he has seen marked improvement follow intravenous infusion of solutions of sodium acetate and sodium bicarbonate.

Williamson draws attention to some important points in treatment. 1. In cases of pregnancy toxemia chloroform should never be administered, because the action of chloroform is to render more grave the lesions which already exist and to increase the acidosis. Ether administered by the open method is in every way preferable as an anesthetic. 2. Calomel should not be used as an aperient, for the lesions in the liver and kidney produced by mercurial poisoning are of the same nature as those of pregnancy toxemia, and it is probable that mercury even in small doses will increase the gravity of the lesions already existing. 3. For a similar reason douches of mercurial antiseptics should never be employed. 4. In all cases in which acidosis is present intravenous infusion with a solution of sodium bicarbonate or sodium acetate should be practiced. 5. The fat metabolism should be spared as far as possible by the administration of glucose. Williamson's practice has been to administer it by the rectum when vomiting is present and to give it by the mouth in the form of glucose lemonade where the digestive functions are not deranged. 6. When a pregnant woman suffering from chronic nephritis shows evidence of the existence of acidosis, the uterine contents should be evacuated without delay, for with a kidney previously damaged the prognosis of pregnancy toxemia is very grave.

20. Thyroid and Alimentary Toxemia.—The thyroid, Langmead says, is a gland a useful function of which is to counteract intoxication. One of the sources of this intoxication is probably the bowel. If the intoxication be proportionately great for the gland, it undergoes hyperplasia and visible enlargement. If the amount of intoxication can be lessened the extra burden is removed and the gland diminished. This has been done by the use of thymol and of vaccines, especially those prepared from cultures of the coliform organisms obtained from the patient's own intestinal flora.

24. Bacteriology of Cholera.—From his investigations during the recent outbreak of cholera in Bombay, Turner draws the following conclusions: 1. The comma vibrio is present in the excreta of persons dying of or suffering from cholera. 2. The vibrio persists until some time after the patient is convalescent, but not indefinitely. 3. In times of cholera epidemic the vibrio is found in waters, wells, tanks, vessels, etc., but it does not retain its morphologic and cultural characteristic or its virulence for any length of time. 4. An outbreak of cholera depends on: (a) the strength and quality of the dose of the virus received; (b) the condition of the infected material which gains access to the intestine; (c) the physical condition of the patient and his power of resistance; (d) certain climatic conditions, and (e) sanitary surroundings of the people—water, food, drainage and refuse disposal, and the habits of the people. 5. When the vibrio leaves the infected person it loses its virulence in direct ratio to the time and conditions to which it is subjected.

25. **Etiology of Rheumatoid Arthritis.**—During more recent investigations the two groups of organisms described by Crowe as diploid streptococci and staphyloid cocci, respectively, in a previous paper have been subdivided, the former into three varieties of streptococci, the latter into some six distinctly different organisms. Staphyloid coccus A, staphyloid coccus B, staphyloid coccus C, staphyloid cocci D and E, staphyloid coccus F. Out of twenty-two cases of rheumatoid arthritis, nineteen were almost certainly infected by staphyloid coccus A. This coccus appears on Fleming's medium first as a rose-red colony, which gradually increases in size and deeply indents the medium. It then spreads out and assumes the appearance of a flattened plate. On subculture it maintains these characteristics and does not alter in color. Its other peculiarities are that blood is slightly hemolyzed; that litmus milk is turned acid, clotted and usually decolorized; and that gelatin is liquefied very slowly, or not at all. Maltose and lactose are reduced, but not mannite; glycerin may or may not be. The shape and color of the colony on neutral red egg medium are, however, the two points on which it is perfectly safe to found a diagnosis. This coccus occurs with remarkable frequency in rheumatoid arthritis. Is the connection between them causal, or is it merely casual? asks Crowe.

27. **Volkmann's Contracture of Hand.**—The treatment in this case was directed first toward overcoming the contraction of the antagonists by means of passive movements, massage and various splints, their shape and application being altered practically every week. De Swietochowski applied every day Bier's elastic bandage for about fifteen to twenty minutes before the massage and exercises started. This seemed to help in softening all tissues, filling their vessels more abundantly with blood. This procedure was, however, apparently a little painful, or rather felt "queer" as the patient declared. Therefore he substituted active hyperemia for the passive hyperemia, giving her every day a hot or warm bath before any manipulations were commenced. This proved to be pleasanter and equally beneficial. De Swietochowski has also found elastic extension of great service as applied to the fingers by means of rubber tubes.

34. **Counting Bacteria in Water.**—Donald's method of enumerating bacteria in water consists in taking a small definite-sized drop of the water, drying it in a circular patch on a slide, fixing effectively the circular film, staining clearly the bacteria present, and counting them under the microscope. The definite size of the drop is determined by the outer circumference of the vertically held clean glass pipet at the level where the drop-surface curving upward and inward joins the outer surface of the pipet point and clings round it. This particular size of pipet gives exactly that definite-sized drop of that liquid only at a particular rate of dropping and a particular temperature. The pipets are gauged to any particular size required in the proper hole of a steel gauge plate such as is used for wire. The gauge sizes most used in the work done by Donald are as follows, the drop-rate being one per second and the temperature 20 c.:

	Size	Diam. mm.	Corresponding to Drops of Water Each
Morse drill and wire gauge	77	0.457	1/101 c.c.
	80	0.34	1/131 c.c.
French draw-plate	8	0.29	1/173 c.c.

The bacteria may be stained before dropping by adding a small quantity of bacteria-free methyl-violet solution and heating for a few minutes in a bath at 60 C. But the drop when dried has so many stain-granules and sharp circular droplets of stain that even an approximate count demands much careful scrutiny and much time.

Journal de Médecine de Bordeaux

May 11, XLIII, No. 19, pp. 289-304

36 *Antimeningococcus Serotherapy of Gonorrheal Arthritis. P. Lasserre.
37 Morbidity from Drafts, Especially in Barracks. M. Vennat.
38 Sudden Reflex Death on Commencing Attempt to Induce Abortion. (Mort subite au cours de manœuvres abortives.) P. Lande.

36. **Antimeningococcus Serotherapy in Gonorrheal Joint Disease.**—Lasserre states that this treatment has proved very successful in France. It seems to be peculiarly effectual in subacute gonorrheal arthritis with a tendency to septicemia, and in the acute forms with effusion or a tendency to ankylosis, while chronic gonorrheal arthritis rebellious to other measures has been often favorably modified by it. Only when the arthritis is accompanied by tuberculous lesions does it seem to be refractory to this form of serotherapy. Four or five injections in the buttocks every four or five days are generally sufficient, with 0.20 or 0.30 gm. at each dose. He reports an instructive case in a man of 25 who developed a joint process a few weeks after infection with gonorrhea. The primary urethral process was so mild that he did not consult a physician, but after a few weeks there was almost continuous fever and pain in both knees and wrists but finally the gonorrheal arthritis seemed to settle exclusively in the right wrist with much swelling and pain. By the fifteenth day after the first of the four injections of 0.2 gm. each, the patient was able to return to business apparently entirely cured of his joint trouble, and the urethra symptoms had also materially improved. Except for a slight rise of temperature after each injection, no by-effects were noted.

Presse Médicale, Paris

May 10, XXI, No. 38, pp. 377-388

39 The Physico-Biologic Bases for Heliotherapy. A. Zimmern.

May 14, No. 39, pp. 389-396

40 *Chronic Amebic Dysentery. A. Chauffard.
41 Production of Heat in Relation to the Sugar Content of the Blood. (Thermogénèse et glycémie.) H. Bierry.

40. **Efficacy of Emetin in Amebic Dysentery.**—Chauffard remarks that in 81 per cent. of 100 cases of amebic dysentery on record the rectum was involved; this differentiates the disease by the discovery of the characteristic lesions in the rectum, the "zinc intestine." He reports a case in which the true cause of the dysentery was long unrecognized as physicians seldom think of the possibility of amebic dysentery in a person who has never lived in the tropics; the patient was sent to health resorts and given treatment of all kinds for his diarrhea, but no medication gave more than merely transient if any improvement for nearly ten years. Then he was given a course of emetin, 0.32 gm. in eight injections in one week, and at once the dysentery was arrested and the patient seems to be completely cured. To make sure, he is to be given a second course later. Rogers of Calcutta, who inaugurated the emetin treatment, had an oportunity to examine the intestines of two patients who had been cured by the emetin and had been killed in accidents. He found the old amebic lesions entirely healed over. He insists that if no improvement is apparent under emetin in two or three days the dysentery is not the work of the ameba. (See also Paris Letter in THE JOURNAL, June 14, p. 1896.)

Revue de Chirurgie, Paris

May, XXXIII, No. 5, pp. 633-784

42 *Inflammation of Synovial Tendon Sheaths with Concretions Resembling Rice. (Anatomie pathologique de la synovite tendineuse à grains riziformes et mode de formation de la limitante et des grains.) E. Forgue and E. Etienne.
43 *Jejunostomy. L. Bérard and H. Alamartine.

42. **Inflammation of Tendon Sheaths with Concretions Resembling Rice.**—Forgue and Etienne give six plates to accompany their study of the pathologic anatomy of this affection. The data presented confirm the assumption that the trouble is due to destructive processes and cicatrization in the tuberculous follicles under the action of the toxins of the tubercle bacilli.

43. **Jejunostomy.**—Bérard and Alamartine had a patient die from mechanical obstruction as the jejunum became kinked at the point of the jejunostomy done according to the Witzel-Eiselsberg technic. They have found on record five other cases of a fatality following this technic. These experiences convinced them of the necessity of improving on this method, and they report a case in which they applied with success a modification of the Greek letter omega technic. It requires the use of a button but it prevents all danger of kinking, and the operation is remarkably simple and easy and ensures perfect continence, they say.

Semaine Médicale, Paris

May 14, XXXIII, No. 5, pp. 229-240

44 *Research on Anaphylaxis. (Les propriétés cryptotoxiques du sérum.) C. Achard.

May 21, No. 21, pp. 241-252

45 Curative Action of the Leukocytolysis Induced by Roentgen Exposures of the Spleen. (L'action curative de la leukocytolyse provoquée par l'irradiation de la rate.) I. I. Manoukhine.

44. **Cryptotoxic Properties of Blood-Serum.**—Achard has coined this term to express what may happen when the colloidal balance of the blood-plasma becomes upset. Under normal conditions and with the normal colloidal physical balance the substances or properties of the blood-plasma balance, and all is well, but let the colloidal balance become upset, then certain of the substances are liable to display active—even toxic—properties, hitherto held in abeyance. In consequence of this upset of the physical balance of the blood-plasma, these substances may thus acquire toxic properties, not from any chemical synthesis or artificial production, but simply by becoming unleashed, breaking loose from the more or less lax colloidal combination in which they have previously been held. To these preformed but hitherto latent cryptotoxic substances he ascribes some share in the production of the anaphylactic shock. Delezenne has recently reported research on cobra venom which seems to demonstrate that the venom does not act directly on the blood-corpuscles but on the serum, releasing from it a hemolytic substance which resists boiling. A similar hemolytic substance has been obtained from egg yolk under the contact action of the venom. Achard has demonstrated in dog serum a similar hemolytic substance by heating the serum to 56 C. This evidently gets rid of the antagonist of this substance and leaves the hemolytic substance free to act. In illustration of the possibilities thus opening up by recognition of this importance of the colloidal balance in the blood-plasma, he cites Bordet's discovery that fresh guinea-pig serum acquired intense toxic properties when mixed with an indifferent colloidal substance such as gelose. After two hours of this contact at 38 C. the mixture was centrifuged to get rid of the gelose and it induced symptoms like those of anaphylactic shock when injected into other animals. Heating to 56 C. did not annul the toxic action, but if the serum had been heated to this point before contact with the gelose no toxic action of any kind was observed.

Berliner klinische Wochenschrift

May 12, L, No. 19, pp. 861-904

46 *Curability and Treatment of Ozena. (Gegenwärtige Behandlung der Coryza atrophique ozénateux.) E. J. Moure.
47 Corpus Luteum and Pregnancy. J. W. Miller.
48 Production and Elimination of Oxalic Acid. (Zur Frage der Oxalsäurebildung und -ausscheidung beim Menschen.) L. Lichtwitz and W. Thörner.
49 Chemistry of the Cell. II. (Kernkörperchen.) P. G. Unna.
50 Functional Tests of the Internal Ear. (Ueber die funktionelle Untersuchung des Ohrlabyrinthes.) Hinsberg.
51 Vascular Lesions in Diabetes. (Zur Aetiologie der Gefässerkrankungen beim Diabetes.) E. Aron.
52 Neosalvarsan More Toxic than Salvarsan. (Darf das Neosalvarsan ambulant angewendet werden?) A. Wolff and P. Mulzer.
53 Mortality from Cancer in Prussia. (Sterblichkeit an Krebs in Preussen während der Jahre 1903-1911 nach Altersklassen.) R. Behla.
54 Determination of Sugar in the Urine. (Ueber den qualitativen und quantitativen Nachweis von Traubenzucker im Harn.) W. Beckers

46. **Treatment of Ozena.**—Moure is convinced that if physician and patient have the necessary courage and patience they will frequently succeed in completely curing ozena; even when a complete cure is not realized, essential improvement is certain. He applies the nose douche with rhythmic jets, as the patient breathes; regularity and extreme care are the main elements for success. Vibration massage of the mucosa is also useful in helping to expel the crusts, spraying the nose with a 5 or 20 per cent. silver nitrate solution. Any irregularity in the passage promotes the accumulation of crusts, and to remedy this as well as to counteract the atrophy of certain portions of the mucosa over the turbinate bones he injects paraffin under the mucosa, when the latter is not so soft and degenerated that it is unable to hold the paraffin Complicating sinusitis is treated by the usual measures; in some cases a radical operation on the maxillary sinus proved the only means to cure the ozena. General treatment is advisable at the same time. He states that he has now records of hundreds of patients definitely cured of their offensive atrophic disease of the nose after a course of treatment lasting from three to six years.

Correspondenz-Blatt für Schweizer Aerzte, Basel

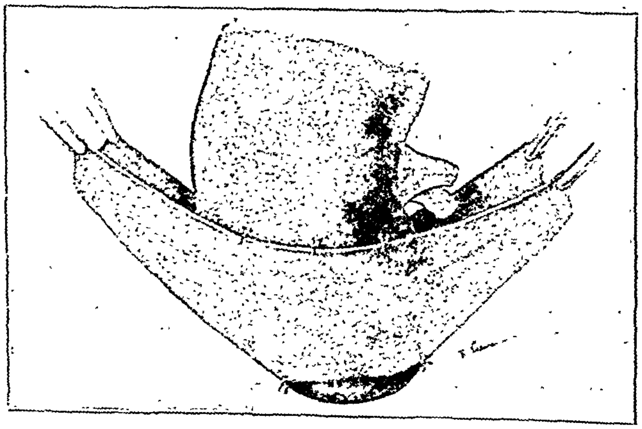
May 3, XLIII, No. 18, pp. 545-576

55 *Operative Correction of Wandering Kidney. (Zur operativen Behandlung der Wanderniere.) T. Kocher.
56 *Mammary Tumors in Men. F. Miescher.

May 10, No 19, pp. 577-608

57 *Traumatic Neurosis Dragging through Eighteen Years' Litigation for Indemnity. (Typischer Fall von ungeheilter traumatischer Neurose unter dem System der Rentenabfindung.) Naegeli.

55. **Operative Treatment of Wandering Kidney.**—*Kocher* regards the technic he describes as an improvement over all other methods he has tried. The hammock in which the kidney is raised is made from a strip of fascia taken from the patient's thigh. The stitches in the tough fascia do not pull out as in other tissues, and the kidney is gently lifted without force. The strip is about 18 by 20 cm. long by 10 cm. wide. An incision 4 cm. long is made in the center in which the lower pole of the kidney fits like a stone in a sling, and the fascia cannot slip up. It is not necessary to put the kidney back into its normal place; it can be lifted up enough in this hammock and the corners of the hammock sutured to the edges of the wound, etc. In doing so the lower pole can be drawn a little forward if the kidney has a tendency to droop. In the cases in which this technic was applied, various other operative measures had failed to relieve permanently. The great advantage of the technic is that the kidney is kept from moving about without depending on any sutures in the kidney



Fascia hammock for wandering kidney.

itself; the lower third or lower two-fifths are solidly held in this firm pocket, which can then be raised as desired. He does not think it necessary to draw the fascia over the kidney as Henschen advocates. This might interfere with the vessels or ureter in case the edges of the fascia grow together. He thinks his method is more reliable than the basket-handle method.

56. **Tumor in the Male Breast.**—Miescher has encountered only two cases of non-malignant tumor in the breast of men, and in one of these there was partial malignant degeneration. The tumor was in a man of 52 and the growth was removed a year after its appearance. There has been no tendency to recurrence or metastasis in the three years since. The other patient was a man of 67 with an ordinary mammary fibroadenoma.

57. **Traumatic Neuroses.**—The evils of the systems current abroad for settling the insurance indemnity after an accident are emphasized in the case reported by Naegeli, in which fourteen certificates had been given by various medical experts in the course of eighteen years. The woman's neurosis had thus been kept constantly fanned into flame. He remarks that a history of an accident in a case seems to have a most mysterious influence on the medical mind, rendering it liable to give credence to the most preposterous things.

Deutsche medizinische Wochenschrift, Berlin

May 8, XXXIX, No. 19, pp. 873-920

58 *Vaccination against Diphtheria. (Ueber ein neues Diphtherieschutzmittel.) E. v. Behring.
59 *Trypanosomes and Spirochetes are Parasites of the Lymph rather than of the Blood. (Ueber den Weg der Infektion bei Trypanosomen- und Spirochätenerkrankungen.) A. Schuberg and W. Böling
60 *Infectiousness of Milk of Syphilitic Women. P. Uhlenhuth and P. Mulzer.
61 *Varicella in Adults. P. Krause.
62 Pernicious Anemia. Queckenstedt.
63 Characteristic Lymphocytosis in Chronic Articular Rheumatism. (Veränderung des Blutbildes beim chronischen Gelenkrheumatismus.) F. Gudzent.
64 Emphysema. J. Plesch.
65 *Postoperative Fatalities from Abnormally Narrow Aorta. (Zur Kenntnis der postoperativen Todesfälle bei abnormer Enge der Aorta.) V. Frühwald.
66 *Depressing Influence of Emotions on Gastric Secretions. M. Bönniger.
67 Correction of Lateral Curvature of the Spine. (Die Korrektur dei seitlichen Rückgrats-Verkrümmungen.) E. G. Abbott (Portland, Maine).
68 The Nose as Source of Infection in Chorea, Acute Rheumatism, etc. (Aetiologische Beziehungen zwischen Rheumatosen und nasalen Erkrankungen.) M. Senator.
69 Sensitized Paper for Roentgenotherapy. (Röntgenaufnahmen mit lichtempfindlichem Papier.) v. Lorentz.

58. **Vaccination against Diphtheria.**—Behring's communication was summarized in the Berlin Letter in THE JOURNAL June 14, p. 1896.

59. **Trypanosome and Spirochete Infection Occurs in the Lymph.**—Schuberg thinks that the results of his research indicate that these parasites penetrate by preference into the lymph passages rather than into the blood. They must be regarded therefore as parasites of the lymph system. This applies especially to the trypanosomes.

60. **Infectiousness of the Milk of Syphilitic Women.**—Uhlenhuth and Mulzer know of no instance in which the spirochaeta pallida has been found in the milk of syphilitic women, but they have recently succeeded in inducing syphilitic lesions in rabbits by inoculations with milk from eight syphilitic parturients although microscopically the milk was sterile. in one of the positive cases the woman was free from symptoms of syphilis but her child had signs of the disease. This confirms the view that the symptomless mothers of syphilitic children have the disease in a latent form, harboring active virus in their bodies. It is still a question whether the infant could be infected by swallowing the virus in the milk. Research on gastric juice showed that it rendered the spirochetes non-motile in a few minutes. Uhlenhuth is now engaged on experimental research, feeding young rabbits with suspensions of living spirochetes, and will report on this research later. For the present all that he asserts is that the milk of syphilitic women may become infectious under certain circumstances.

61. **Varicella in Adults.**—Krause remarks that some of the German text-books deny the occurrence of varicella in adults but he has encountered four certain cases. The most characteristic symptom of varicella is that the exanthem develops in waves and the pustules are of various ages, coming out over several days, while in his sixty cases of small-pox the exanthem had always developed completely in the course of one or two days. The positive result of vaccination confirms the diagnosis of varicella. The number of leukocytes is always normal or below, while in small-pox there is leukocytosis and marked absolute lymphocytosis. In one of his varicella cases the patient was in a large institution and differentiation was extremely important. Inoculation of calves with small-pox seldom gives positive results but inoculation of the rabbit cornea with the content from a pustule of a variola patient is almost invariably successful but never with varicella.

65. **Postoperative Fatality with Abnormally Narrow Aorta.**—Frühwald's patient was a young man supposedly healthy but excitable who required removal of an angiofibroma from the nasopharynx. The operation was tedious but the pulse was relatively good. Half an hour after conclusion of the operation the respiration became irregular, the pulse imperceptible and the patient died half an hour later. There had not been much blood lost during the operation; at most, three-fourths to one liter, and 800 c.c. saline had been infused. There was no sign of the status lymphaticus but the aorta was remarkably small and narrow. The vascular system was evidently inferior, and the patient was unable to rally after the loss of a comparatively small amount of blood. This case teaches anew that even the most careful examination is unable to reveal this inferiority of the aorta and thus warn of impending danger in such cases. The operation was done under morphin, scopolamin and the Billroth mixture. The foramen ovale was patent which is a frequent accompaniment of hypoplasia of the aorta system.

66. **Psychic Factors and Stomach Functioning.**—Bönniger reports research on dogs which confirms the powerful influence of the mind and emotion on stomach functioning. When the dogs were much annoyed or distressed, not only the secretory functioning but the motor were arrested more or less completely. All powerful emotions, except those stimulating the appetite, check gastric functioning; pain, fright and great joy take away the appetite, and Bönniger is convinced that in certain cases of atony psychic factors are at work, and treatment should be by psychic means rather than by dieting. His research was undertaken to confirm Hemmeter's and Cloetta's statements in regard to the reduction of the gastric juice in hyperacidity by protracted feeding with milk. Cloetta fed a group of dogs exclusively on milk and another group on meat, and after three months found no hydrochloric acid in the milk dogs. Bönniger's research gave conflicting conclusions—the milk dogs having normal gastric secretion or not, according to certain external conditions. This suggested that the gastric secretion was under the influence of psychic factors, and this assumption was abundantly confirmed by further experiments in this line.

Jahrbuch für Kinderheilkunde, Berlin

May, LXXVII, No. 5, pp. 505-628

70 Metabolism of Fat, Calcium and Nitrogen in Infants. (Beitrag zum Fett-, Kalk- und Stickstoffwechsel beim Säugling.) E. Aschenheim.
71 *Insufficiency of the Liver in Scarlet Fever. (Leberinsuffizienz bei Scharlach.) P. Tachau.
72 Congenital Diaphragmic Hernia. (Hernia diaphragmatica congenita bei einem 3jährigen Kinde.) F. Reiss.
73 *Sick Children and Flies. J. Zentner.
74 Summer Diarrhea in Infants. (Zur Frage der Sommerdiarrhöen der Säuglinge.) S. Wolff.
75 Urine Test for Breast-Milk Feeding. (Die Engel-Turnausche Reaktion bei Brustkindern.) S. Ostrowski.

71. **Liver Function in Scarlet Fever.**—Tachau reports twenty cases of rather mild scarlet fever observed during 1912. That there was some disturbance of the liver function is shown by

the fact that there was urobilinuria, alimentary levulosuria and increased excretion of amino-acids. In the mildest cases where there was only urobilinuria it was probably due purely to passive insufficiency caused by increased blood disintegration. But when there was an abnormal excretion of nitrogen products there must have been some real injury to the liver parenchyma. He considers it an advantage not to have had very severe cases, for such injury as there was in his cases was undoubtedly due to a specific action of the toxin of the disease and not to the septic conditions which often arise in severe scarlet fever.

73. **Protection against Flies.**—Zentner reviews recent literature proving that pathogenic germs are carried by flies, and emphasizes anew the necessity of protecting sick children from them. Besides fly paper and other methods of catching the flies and screens for keeping them out of the building, he uses a frame hung quite high over the child's bed over which coarse netting is thrown so that the child is surely protected without interference with air or increased heat.

Zentralblatt für Chirurgie, Leipsic

May 10, XL, No. 19, pp. 713-760

76 Improved Technic for Resection of Stomach and Intestines. (Zur Technik der Magen- und Dickdarmresektionen.) • Gelinsky.

Zentralblatt für Gynäkologie, Leipsic

May 10, XXXVII, No. 19, pp. 681-712

77 Source of Infection in Emphysematous Vaginitis. (Herkunft der Keime bei Colpitis emphysematosa.) O. Aichel.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 8, XXXIV, No. 55, pp. 575-582

78 *Pollakiuria in Acute Infectious Diseases. (La pollachiuria in alcuni stati morbosi e la sua patogenesi.) P. Galli.

May 13, No. 57, pp. 599-606

79 Hemopoietic Serum Therapy. (Ricerche cliniche sull'azione terapeutica del siero di animali anemizzati.) C. Gibelli.

78. **Pollakiuria in Acute Infections.**—Galli noticed in a recent epidemic of scarlet fever that in about 10 per cent. of the cases there were such frequent desires to urinate that the children were unable to get their sleep at night and were disturbed during the day. This was most marked the second or third day of the disease. Pollakiuria was noted also in nearly 15 per cent. during a recent epidemic of whooping-cough, but only during convalescence. In both diseases the urine and bladder were apparently normal. He thinks that the trouble was probably, in the scarlet fever cases, the result of the action of the scarlatina toxin on the kidneys, the irritation of the kidneys causing an exaggeration of the influence on the bladder normally exerted by the kidneys. In the whooping-cough, on the other hand, the disease toxin had affected the spinal centers which control the bladder sphincter. Psychic factors must be eliminated as the patients were all quite young children.

Policlinico, Rome

May 11, XX, No. 19, pp. 661-696

80 *Tetragenus Septicemia. (Caso di setticemia da micrococco tetrageno nell'uomo.) F. Marcora.

May, Medical Section No. 5, pp. 193-240

81 Recovery after Splenectomy in Case of Hemolytic Jaundice with Apparently Pernicious Anemia. (Intorno agli itteri emolitici.) G. Antonelli. Commenced in No. 3.

82 Noma. (Ricerche sul noma.) A. Gasbarrini.

80. **Tetragenus Infection.**—Marcora's patient was a woman of 40 who had had severe typhoid at 31 and gall-stone colics in recent years. The spleen was much enlarged and there was remittent fever with intervals of normal temperature. The temperature at times ran up to 41 C. (105.8 F.) with chills, but there were few of the general phenomena usually accompanying such high temperatures. The tetragenus was cultivated from the heart blood, from abscesses in the liver and from the spleen. The patient succumbed at the end of the second month to a sudden acute endocarditis.

Medizinskoe Obozrienie, Moscow

LXXIX, No. 4, pp. 297-382

83 *The Primary Focus with Tuberculous Meningitis. A. Artamonoff.

84 Kala-Azar at Tiflis; Four Cases. A. Gourko.

85 Favorable Experiences with Bass and Johns' Method of Cultivating Malarial Plasmodia in Vitro. A. Gourko and J. Hamburger.

No. 5, p. 383

86 *Sexual Psychogenic Cardiac Neuroses: Two Cases. A. Voltke.

87 *Ankylosis of Vertebrae, Hip and Shoulder Joints. (Spondylose rhizomélique.) Melikianz.

88 *State Sanatoriums for the Tuberculous versus Free Specific Treatment. S. F. Volfring.

83. **Primary Focus with Tuberculous Meningitis.**—Artamonoff has been studying the necropsy records of the last twenty-nine years at a Moscow children's hospital, seeking to determine the primary focus and mode of spreading of tuberculosis to the brain membranes In 218 cases of tuberculous meningitis, the lungs, pleura and bronchial lymph-nodes were found involved in 210; these organs ought to be looked on as the main points of entrance for the tuberculous infection.

86. **Phrenocardia.**—This is a name given by Herz to a group of symptoms characterized by pain in the cardiac region, respiratory disorders and cardiac palpitation—the so-called triad of Herz, sometimes defined as a sexual cardiac neurosis. The pain is always to the left of the cardiac dulness, occasionally below the apex beat, but never to the right of the sternum. It usually corresponds to the place of the attachment of the diaphragm, the sixth and seventh ribs, and is due to the spasmodic contraction of the diaphragm. The respiratory disturbances consist in attacks of air-hunger, which the patient tries to overcome by attempts at deep breathing. They are the result of lowering of the diaphragm on the left side. The heart, therefore, also sinks, assumes a vertical position, and on *x*-ray pictures appears as a "falling drop," and is movable; the condition is an actual cardioptosis. Among the subjective complaints, the most prominent are cardiac palpitations, often in the form of embryocardia, that is, the heart sounds follow each other like the ticking of a watch. The patient is very restless during the attacks; hypodermic injections of morphin do not benefit, and occasionally during the attack there develop very painful infiltrations of the periosteum of the left ribs. This infiltration of the periosteum has been called by Herz pseudoperiostitis angioneurotica. This, with the patient's conduct during the attack, may help to differentiate phrenocardial attacks from those of angina pectoris. Auscultation and percussion of the heart do not reveal any changes, but the pulse is usually abnormally fast, and becomes greatly accelerated from any physical exertion or emotional stress. The causes of phrenocardia are functional nervous disorders, as hysteria, neurasthenia; constitutional diseases, such as anemia, chlorosis, and intoxications (alcoholism, tobacco, etc.), but chief of all the causes rank sexual abnormalities for the purpose of avoiding pregnancy. This is the reason why phrenocardial attacks usually occur in women. Against the abnormal sexual life the treatment must be directed, usually with good results, as Voltke's two cases show. When the etiology cannot be ascertained, psychoanalysis according to Freud must be used. The respiratory disturbances are easily checked by inhalation of ether.

87. **Rhizomelic Spondylosis.**—This subject is exhaustively discussed by Melikianz from the clinical and pathologic points of view. He says that the form described by Bechterew as ankylosis of the vertebral column is practically the same disease that was described by Marie and Strümpell as rhizomelic spondylosis, and by other authorities as rheumatic spondylosis. He refers all these three forms of complete ankylosis of the vertebrae with more or less ankylosis of the hip and shoulder joints to chronic arthritis with ankylosis. This view is justified by the fact that all these three affections usually have one common etiology, such as some infection (rheumatism, gonorrhea, typhoid), and have the same clinical and pathologic signs and symptoms, and that it is impossible

to classify some cases, as his case proves, either as Bechterew's or the Marie-Strümpell form or as a rheumatic spondylitis, because cases frequently occur that show a combination of symptoms peculiar to one or more of these three types.

88. **The Sanatorium System versus Dispensaries in the Campaign against Tuberculosis.**—Fuchs-Volfring gives the results of his studies of different official reports of the German state compulsory insurance office in regard to measures against tuberculosis. In 1910 there were treated in Germany's sanatoriums 41,262 patients, of whom 13,905 were females, at the cost of about $4,100,000, with the average stay of seventy days. Of this number only 6 per cent., or 2,365, left the sanatoriums apparently cured, and only 12 per cent. improved, so that each so-called cured workingman cost 7,364 marks ($1,841) and each improved patient $581. Of 16,000 patients with tubercle bacilli in the sputum, 3,200 left free of the tubercle bacilli, at a total cost of 6,112 marks; each patient thus freed from bacilli cost 1,910 marks. Official data show that there are 800,000 tuberculous persons in Germany, so that it would cost at the above rate one and a half milliard marks to free all these patients from their tubercle bacilli. In other words, Germany spends annually, with the sanatorium system, 17,000,000 marks to combat the spreading of tuberculosis, and renders safe only 0.4 per cent. of those affected, namely, 3,200. All the remaining 796,800 remain with their bacilli, thus spreading the infection and proving that the popular sanatoriums, while highly expensive, yet accomplish very little in the way of complete cure or prevention of the spreading of the infection.

Equally unsatisfactory are the results in respect to the wage-earning capacity. He found that most of the incapacitated among workingmen are those that suffer from tuberculosis, that they constitute one-fifth or one-sixth of all that receive sick benefit from the insurance office, that the number of such invalids is steadily increasing, and in a greater proportion than from other diseases, notwithstanding the fact that the fight against tuberculosis costs twice as much as that of all other diseases put together. The expenses of the insurance companies in 1897 were 50 per cent. of the income; at the present they are 93 per cent. because of the increased amount of invalid pensions and expenses for treatment. Therefore, he comes to the conclusion that the state sanatorium treatment in Germany has proved a failure, being of comparatively little aid in the campaign against tuberculosis, as the expenses are too enormous in comparison with the few patients that get cured, and that the spreading of the disease is not prevented, and that the number of patients who have their wage-earning capacity restored is large only on paper. In his opinion the method of dispensaries, specific treatment and prophylactic measures to stop the spreading of the disease, is more practical and accomplishes more, as it can be applied to a far larger number of patients.

Semana Medica, Buenos Aires

April 17, XX, No. 16, pp. 909-964

89 *Bone and Joint Tuberculosis. (Tratamiento de las tuberculosis osteo-articulares.) I. Ymaz.
90 Advantages of Lithotripsy for Bladder Stones. (Calculos vesicales. Su tratamiento.) R. Landivar.

89. **Bone and Joint Tuberculosis.**—Ymaz protests against calling these lesions "surgical tuberculosis" or "local tuberculous lesions" as experience has amply demonstrated that operative measures are rarely required while necropsy findings scarcely ever fail to reveal some focus elsewhere, in the lungs, scarcely ever fail to reveal some focus elsewhere, in the lungs, pleura or mediastinal lymph-nodes. Treatment should there- fore be by general measures as for pulmonary tuberculosis, resting and immobilizing the limb and exposing it to the direct sunlight. Intra-articular injections are not only useless but dangerous in many cases. He once witnessed the transforma- tion of a favorably progressing knee lesion into a purulent arthritis under the influence of five injections into the joint done by an eminent specialist whose technic was above suspicion. He cites further nine cases from the literature in which the local injection of camphorated naphthol proved directly fatal.

Hospitalstidende, Copenhagen

May 7, LVI, No. 19, pp. 505-536

91 Clinical Importance of Examination of the Venous Pulse. (Venepulsundersøgelser.) O. V. C. E. Petersen.

May 14, No. 20, pp. 537-560

92 *Tuberculin of Bovine Origin in the Diagnosis of Surgical Tuberculosis. (Kliniske Undersøgelser af Bovotuberkulin som Diagnostikum ved kirurgisk Tuberkulose.) A. Buch.

92. **Reaction to Tuberculin from Bovine Tubercle Bacilli in Children with Surgical Tuberculosis.**—Buch applied the tests to 116 children at a sanatorium for children with surgical tuberculosis, using both human and bovine tuberculin and applying them both by the Pirquet skin technic and by the intradermal or intracutaneous method. It was found that in 10 per cent. with the intracutaneous and in 18 per cent. with the cutaneous (Pirquet) technic the reaction was stronger with the bovine than with the other tuberculin. In no instance was a positive reaction to the bovine tuberculin obtained without a reaction to the human, but in 6 and 5 per cent. the human was positive and the bovine negative. Both reactions were equally marked in 29 and 22 per cent.; the human more marked than the bovine in 55 per cent. with both technics. In previous research of this kind the subjects have been generally adults with pulmonary tuberculosis.

Ugeskrift for Læger, Copenhagen

May 1, LXXV, No. 18, pp. 705-748

93 *Tubercle Bacilli in the Blood-Stream. P. Bogason.

May 8, No. 19, pp. 749-808

94 Study of the Blood. (Undersøgelser af normale Menneskers Blod.) V. Bie and P. Moller.
95 *To Abort a Boil. (En ny Metode til at kupere en begyndende Furunkel.) K. Herrild.

93. **Tubercle Bacilli in the Blood.**—Bogason found tubercle bacilli in the blood-stream in only two of forty-one patients examined, although he worked with 10 c.c. of blood. It is his practice to make the examination in the morning when the fat content of the blood seems to be at its lowest. In the afternoon there is so much fat in the blood that some of the figured elements behave in respect to stains like acid-fast bacilli and deceptively resemble them. Other bacilli besides the tubercle bacilli in the presence of fat acquire the property of being acid-fast. The acetic acid-formaldehyd technic enhances this acid-resisting tendency. It is possible further that the blood may contain tubercle bacilli derived from milk, without actual pathogenic properties owing to their scanty number and to the destructive action of the phagocytes. He thinks it might be interesting to record the bacilli content of the milk at the hospitals where tubercle bacilli have been found in the blood-stream in such surprisingly large proportions of cases. The guinea-pigs inoculated with the blood might have become contaminated from tubercle bacilli on the patient's skin at the point where the blood was drawn. The patient holds his hand before his mouth when he coughs, and from the hand to the forearm is not a long way. If the same cannula is used for puncture of the vein and for injection into the animal, accidental inoculation is likewise possible. He adds further that the lesions of coccidiasis in animals may deceptively simulate those of tuberculosis. He admits, of course, that tubercle bacilli may occur in human blood but he thinks there are so many possible sources of error in the manipulation of animals for experimental inoculation that positive findings in regard to the presence of tubercle bacilli in the blood-stream should be regarded with considerable skepticism.

95. **Hair-Pin to Abort Furuncle.**—Herrild squeezes out the contents of an incipient furuncle by pressure applied with a smooth "invisible" hair-pin encircling the lesion and forcing the contents out centrifugally. Other measures, incision, puncture, cauterization and the like generally drive the virus in, he remarks, while the pressure from the hair-pin works from below outward. In the fifty cases in which he has applied it the pustule healed at once and no further ones developed.

MINUTES OF THE MINNEAPOLIS SESSION

(Continued from page 1966)

ANNUAL MEETING OF SECRETARIES OF SECTIONS

Believing that closer cooperation among the sections is advisable, and that such cooperation is attainable only by bringing the principal officers of the sections together, the Board passed a resolution authorizing the calling of a meeting annually, on the day preceding the October meeting of the Board of Trustees, of the secretary or the chairman of each of the several sections of the Association, and the paying of the actual expenses of these officers. It is understood that the secretary will be the one to attend these meetings, but that in case he is unable to do so, the section shall be represented.

PUBLIC HEALTH JOURNAL

The opinion of the Council on Health and Public Instruction was requested relative to the publication of a public health journal. The Council advised that it was not prepared to advise the publication of a popular health journal at the present time.

SMALL MEDICAL JOURNAL

In its report last year, the committee appointed by you in 1911 to investigate the advisability of publishing a small medical journal advised against this, believing that the existing medical journals made this unnecessary. It recommended, however, that the Board of Trustees consider the advisability of appointing a committee to assist the state journals that "are conducted in accordance with reasonable rules, as to plain honesty in their advertising and reading pages, in securing honest advertisements on a reasonable percentage basis, etc." In line with this recommendation a plan is being worked out to establish a cooperative medical advertising bureau in the Association headquarters, with the object of furthering the interests of the various state journals that comply with the standard regarding advertising. This will mean the appropriation of some money, as the Board expects to be able to adopt a plan at the present meeting.

CONFERENCE OF SECRETARIES OF STATE SOCIETIES

In accordance with the resolutions referred to the Trustees by you last year, the Board endorsed the recommendation and called a conference of state secretaries. This conference was held in Chicago, October 23-24, and its labors were reported in The Journal, November 2, and in complete detail in the *American Medical Association Bulletin*, November 15.

Relative to the action of the House of Delegates recommending that the Board of Trustees be directed to amend the charter so as to provide that the President, the Secretary and the Editor of The Journal shall be ex-officio members of the Board of Trustees without the right to vote, and that the Secretary of the Association shall be ex-officio Secretary of the Board of Trustees: we consulted the attorneys of the Association, Loesch, Scofield and Loesch, and they said,

> "It is our opinion that such amendment would be invalid under the corporation law of Illinois."

DISTRIBUTION OF "PRINCIPLES OF MEDICAL ETHICS"

According to your instructions, a copy of the "Principles of Medical Ethics," in booklet form, was mailed to each member of the Association during the year.

ARCHIVES OF INTERNAL MEDICINE

The circulation of the *Archives of Internal Medicine* is increasing as much, probably, as could be expected, since it appeals only to the more progressive of internists. The average circulation for the last three years has been as follows:

1910	2,133
1911	2,170
1912	2,027

Thus it will be noticed that there was a slight decrease last year. As a matter of fact, however, the outlook is encouraging, because an increasing number are added to the list who are becoming permanent subscribers, whereas at first a very large number discontinued after taking the journal for a year. There was a loss of about $500 last year on the *Archives*.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

As the *American Journal of Diseases of Children* appeals only to those especially interested in pediatrics, a large circulation cannot be expected, at least for the present. The circulation now is approximately 1,000 copies. There was a loss on this journal last year of $298.

COUNCIL ON PHARMACY AND CHEMISTRY

The value of the work of the Council on Pharmacy and Chemistry and of the Chemical Laboratory is now so well known to you that it is not necessary to go into a detailed statement of what these two institutions are doing. We would emphasize, however, what was stated last year; namely, that the Council is now doing more practical and constructive work than ever. Especially of this character is the clinical and research work being done under the direction of the Committee on Therapeutic Research. The Board has thus far appropriated $3,500 for this work, believing that it should be encouraged.

As an illustration of the Council's broader aims toward the improvement of conditions, it should be mentioned that it has now issued, in preliminary form, a publication known as "Useful Remedies." This contains a limited list of drugs, and when issued in complete form, the book will include a description of the action, use and dosage of the drugs mentioned. The main object of the book is to furnish a list of important drugs that shall be used as a basis of teaching in medical schools, and also as a basis on which state boards of examiners shall examine applicants for license to practice. Although issued only in a tentative form, this book has already been adopted by several schools and also by various examining boards.

As a direct result of the work of our Council on Pharmacy and Chemistry, a similar body has been created in Germany. One of the principal men in this body, and the one really responsible for it, is Professor Heubner, of the University of Göttingen, and editor of the *Therapeutische Monatshefte*. The Council asked the Board of Trustees to elect Professor Heubner corresponding member of the Council on Pharmacy and Chemistry. This the Board gladly did, especially because of the great work he has done in bringing about better conditions in Germany.

The work of the Council on Pharmacy and Chemistry is not so cordially supported as it should be by the very class which should naturally be regarded as its chief supporter; namely, the leaders in our profession, surgeons as well as clinicians. The rank and file of the profession *do* appreciate the work and *are* cooperating.

Considerable routine work is necessary on the part of the Chemical Laboratory in the analysis of nostrums exposed in The Journal. At the same time, it is doing what may be regarded as constructive work. For instance: a large number of physicians dispense their own drugs, and it is charged that many of such physicians obtain their drugs from so-called "physicians'" supply houses. It is also charged that the official drugs furnished by these supply houses are not standard. Our chemists have about completed an investigation covering many of the products put out by these firms, and the report of this work will soon be published.

EXHIBIT AT THE INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY

The Association had a very creditable exhibit at the International Congress on Hygiene and Demography in Washington last December. This exhibit appealed directly to the layman, and dealt especially with "patent medicines." It consisted of illustrations, specimens and large cards, and included many of the fakes and frauds which have been shown up through The Journal. The exhibit attracted wide attention and was awarded a certificate of superior merit.

NOSTRUMS AND QUACKERY

The work of enlightening the public in regard to fraudulent "patent medicines" and quackery has not only been broadened in its scope, but is producing encouraging results. The number of inquiries from laymen has increased enormously. Civic organizations and others interested in the public health have taken advantage of the exposés made by The Journal, by bringing to the attention of laymen the viciousness and cruelty connected with the disreputable business of quackery and nostrum exploitation. Lay societies carrying on antituberculosis campaigns have used the information published in The Journal on "consumption-cure" frauds and have distributed, through their visiting nurses and other channels, numbers of our pamphlets on these fraudulent "cures." Further, large commercial organizations are placing our pamphlets and books in their employees' libraries. Newspaper and magazine publishers are continually writing for information about this or that "patent medicine" and requesting an expression of opinion regarding the acceptability of advertising of products of this sort. An organization of national advertisers, through its various vigilance committees, is calling on The Journal for data regarding many fraudulent medical concerns and products.

In addition to the pamphlets published by the Association exposing medical frauds, a number of exhibit cards have been prepared dealing with the same subject. While these cards were originally designed for the American Medical Association's exhibit at the Fifteenth International Congress on Hygiene and Demography, there has been a demand for them on the part of various organizations. Some of these cards have been furnished for "health trains," as for instance those in North Dakota, Louisiana and Michigan. The demand for a wider dissemination of the information which this department has accumulated made it seem worth while to prepare a set of stereopticon slides that could be used in giving illustrated lectures on the subjects of nostrums and quackery. While these slides have not been advertised in any way, there has already been a demand for them, which indicates the need of such material. Some of the uses to which they have been put are referred to in the report of the Council on Health and Public Instruction.

The evil of the "patent-medicine" business and quackery has become so serious and wide-spread that there is apparently a world-wide effort to curtail it. The American Medical Association has been called on by representatives of the British government to furnish such data as it has on the nostrum evil, for use in connection with the investigation of the same subject by a British parliamentary committee. This was followed by a further request from the British Consulate for another set of the same matter for transmission by the British Embassy to the government of the Union of South Africa. Still more recently, there has been a request from the officials of the state of Western Australia for similar data.

The second edition of the book "Nostrums and Quackery" has been issued. The first edition of 10,000 copies was exhausted in less than a year. The new edition is a larger book, having over 700 pages with more than 300 illustrations. The number of newspapers and lay magazines that are either quoting direct or otherwise using the exposés that appear in The Journal is steadily increasing. One well-known lay journal, published in the interest of consumptives, is reprinting in full the various articles on "consumption-cure" frauds that originally appeared in The Journal.

LIABILITY ACCIDENT INSURANCE

Last year Illinois adopted a workmen's compensation act, making the employer more responsible for injuries to workmen than was the case before. About the time that this law went into effect, one of our employees met an accident which resulted in his death. He was a married man, and while there was some doubt as to the responsibility, it was believed that his widow should be aided. On our attorneys advice she was paid $1,000, and released the Association from further liability. The insurance company, however, refused to recognize any liability in the matter and would *not* protect the Association in any way.

After some discussion the Trustees adopted a resolution to the effect that the Association discontinue the liability accident insurance, and in lieu thereof create a permanent insurance fund; that $1,000 a year be placed to the credit of this fund until such time as the fund shall reach $10,000 in amount; that this fund be placed in bank on a certificate of deposit drawing 3 per cent. interest; and that the fund be used in paying accident claims and the expenses necessarily incurred in taking care of such claims. There are $2,000 now in the fund.

DAVIS MEMORIAL

In accordance with your authorization, we secured a bronze bust of Dr. N. S. Davis, and placed it in what was originally called the library, but which, by definite action on the part of the Board, is now designated as the Davis Memorial Room. The balance of the fund, $3,299.43, is made a permanent fund to be used in any appropriate way, other than the purchase of books, in furnishing and maintaining the Davis Memorial Room in the new building.

The Board suggests that the Davis Memorial Room will make an excellent repository for articles of historical interest to the medical profession and to medicine in this country, such as medallions, portraits of prominent men, Festschrifts, memorial volumes, etc. As an illustration, the Trustees report and acknowledge in behalf of the Association the contribution of a replica of a large portrait medallion of Dr. W. S. Thayer, presented to Johns Hopkins University by his friends as a testimonial of appreciation on his declination of a call to Harvard University. The Trustees will be pleased to receive other similar contributions, which will be placed on exhibition in the Davis Memorial Room and preserved for the future.

In the addenda to our report is a table which shows the number of members and subscribers for each year commencing with 1900. A study of that report will reveal the fact that during the past year membership increased, according to the count of the mailing list, 2,832; whereas, for the three years preceding, it will be noticed that there was practically no increase in membership—in fact, a decrease for the year 1911. It will also be noticed, however, that there was an apparent decrease last year of 1,757 in the number of subscribers. The explanation is as follows:

As will be remembered, there was some difficulty for about three years in regard to second-class mail rates and our right to send The Journal to members as such. During all this time little effort was made to get subscribers to transfer to the membership list. Last year, however, the matter was satisfactorily settled; we adopted the old plan, and persistent efforts were made to transfer eligible subscribers to the membership list. The actual increase in our mailing list for the year was 1,118.

In further explanation: The preceding figures are given as a comparative basis only, by count of our mailing list, exclusive of ex-officio members, members who are at present receiving another of the Association's publications in place of The Journal, and those whose copies of The Journal are being temporarily held. The actual membership in the American Medical Association on Jan. 1, 1913, was 37,493.

The treasurer's and auditor's reports are appended and give detailed and interesting information regarding the property and financial status of the Association. As the House of Delegates is the business body of the Association, we are sure that each member will give these reports careful study and consideration.

Respectfully submitted,

W. W. Grant, Chairman.
Frank J. Lutz,
C. E. Cantrell,
W. T. Councilman,
Philip Marvel,
Philip Mills Jones,
W. T. Sarles,
M. L. Harris, Secretary.

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of The Journal of the American Medical Association, from Jan. 1, 1912, to Dec. 31, 1912, inclusive, 52 issues, was as follows:

January 6	58,640	
January 13	58,343	
January 20	57,536	
January 27	57,243	
		231,762
February 3	56,746	
February 10	55,906	
February 17	55,442	
February 24	55,671	
		223,765
March 2	55,488	
March 9	55,613	
March 16	55,629	
March 23	55,543	
March 30	55,490	
		277,763
April 6	58,002	
April 13	55,539	
April 20	55,549	
April 27	55,671	
		224,761
May 4	65,051	
May 11	55,615	
May 18	56,107	
May 25	56,217	
		232,990
June 1	56,543	
June 8	56,824	
June 15	60,544	
June 22	57,742	
June 29	57,861	
		289,514
July 6	57,831	
July 13	57,601	
July 20	57,633	
July 27	56,443	
		229,508
August 3	56,521	
August 10	55,515	
August 17	56,492	
August 24	58,054	
August 31	56,540	
		283,122
September 7	56,459	
September 14	57,494	
September 21	57,190	
September 28	58,260	
		229,403
October 5	56,247	
October 12	56,381	
October 19	56,406	
October 26	56,859	
		225,893
November 2	57,022	
November 9	57,213	
November 16	57,293	
November 23	57,372	
November 30	57,589	
		286,489
December 7	60,388	
December 14	60,206	
December 21	58,749	
December 28	60,289	
		239,632

Total issues for twelve months............2,974,602

Weekly average 57,204

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

The following table gives the number of physicians (based on the third edition of the American Medical Directory) in the United States, number receiving THE JOURNAL and the approximate percentage in each state. Copies to physicians in the United States Army, United States Navy, United States Public Health Service, etc., omitted.

State.	Number Receiving JOURNAL.	Physicians in State 3d A. M. Dir.	Approx. per cent. 3d A. M. Dir.
Alabama	614	2,409	26
Arizona	161	247	65
Arkansas	590	2,580	23
California	2,561	4,764	54
Colorado	798	1,738	46
Connecticut	697	1,562	44
Delaware	84	246	34
District of Columbia	518	1,350	38
Florida	371	973	38
Georgia	806	3,007	26
Idaho	195	420	46
Illinois	5,263	9,885	56
Indiana	1,654	4,979	33
Iowa	1,785	3,658	49
Kansas	997	2,635	38
Kentucky	954	3,599	26
Louisiana	735	1,924	38
Maine	400	1,176	35
Maryland	1,018	2,083	49
Massachusetts	2,674	5,631	47
Michigan	1,660	4,095	41
Minnesota	1,436	2,253	64
Mississippi	503	2,003	25
Missouri	2.131	6,025	36
Montana	268	512	52
Nebraska	839	1,777	47
Nevada	86	144	60
New Hampshire	285	704	41
New Jersey	1,162	2,870	41
New Mexico	189	430	44
New York	5,737	14,805	38
North Carolina	552	1,836	30
North Dakota	355	593	60
Ohio	2,769	7,552	37
Oklahoma	698	2,633	27
Oregon	532	1,041	51
Pennsylvania	4,462	11,299	39
Rhode Island	435	751	58
South Carolina	472	1,275	37
South Dakota	332	651	51
Tennessee	813	3,309	24
Texas	1,510	5,829	26
Utah	247	427	58
Vermont	240	679	35
Virginia	763	2,350	32
Washington	852	1,620	53
West Virginia	588	1,634	37
Wisconsin	1,491	2,637	57
Wyoming	107	235	46

This table shows the number of members and subscribers for each year commencing with 1900:

Year.	Members.	Subscribers.
Jan. 1, 1900	8,445	4,633
Jan. 1, 1901	9,841	8,339
Jan. 1, 1902	11,107	10,795
Jan. 1, 1903	12,553	12,378
Jan 1, 1904	13,899	14,674
Jan. 1, 1905	17,570	15,698
Jan. 1, 1906	20,826	17,669
Jan. 1, 1907	26,255	20,166
Jan. 1, 1908	29,382	20,880
Jan. 1, 1909	31,999	18,983
Jan. 1, 1910	33,032	19,832
Jan. 1, 1911	33,540	20,504
Jan. 1, 1912	33,250	21,620
Jan. 1, 1913	36,082	19,863

Treasurer's Report

REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE YEAR ENDING DEC. 31, 1912

ASSOCIATION ACCOUNT

RECEIPTS

Dec. 30, 1911—Balance—		
Bonds per schedule	$ 40,000.00	
Certificates of deposit	60,000.00	
Checking account	1,536.57	
		$101,536.57
1912—		
February 8—Surplus transferred from current account		30,000.00
March 8—Interest on deposit certificate		902.50
April 1—Bond interest		400.00
July 1—Bond interest		400.00
August 28—Interest on deposit certificate		935.00
October 1—Bond interest		400.00
December 31—Interest on bank balances		51.37
December 31—Bond interest		400.00
		$135,025.44
1913—		
January 2—Balance—		
Bonds per schedule	$ 40,000.00	
Certificates of deposit	90,000.00	
Checking account	5,025.44	
		$135,025.44

DAVIS MEMORIAL FUND

1912—		
November 1—Cash in Northern Trust Co. Saving Bank received from former Treasurer, Dr. Frank Billings	$ 3,475.68	
December 31—Interest	48.75	3,524.43
November 8—To Cash—Art Bronze Foundry		225.00
December 31—Balance		$ 3,299.43

W. A. PUSEY, Treasurer.

Auditor's Report

MARWICK, MITCHELL, PEAT & CO., CHARTERED ACCOUNTANTS
115 SOUTH LA SALLE STREET

CHICAGO, Jan. 29, 1913.

To the Board of Trustees of the
American Medical Association, Chicago, Ill.

Dear Sirs:

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended Dec. 31, 1912, on which we now submit our report, together with the following statements:

Exhibits
  "A" Balance Sheet as at Dec. 31, 1912.
  "B" Income and Profit and Loss Account for the year ended Dec. 31, 1912.
Schedules
  "1" Bonds as at Dec. 31, 1912.
      For the year ended Dec. 31, 1912:
  "2" Journal Publication Expenses.
  "3" General Expenses.
  "4" Provision for Depreciation.
  "5" Association Expenditure.

We examined the securities representing the investments of the Association and counted the cash on hand. The cash in banks was verified by certificates from the bankers.

The disbursements were vouched and found in order, and a satisfactory test of the revenue of the Association was made.

The balance sheet now submitted is, in our opinion, a full and fair statement of the financial position of the Association as at Dec. 31, 1912, and as shown by the books, subject to the qualification that no provision has been set aside for accrued taxes, and subscriptions and memberships paid in advance, which are partially offset by unpaid subscriptions and memberships earned but not included in the accounts.

The following is a comparative condensed balance sheet as at Dec. 31, 1912, and 1911:

Assets	December 31 1912	December 31 1911	Increase	Decrease
Property and Plant	$345,613.70	$352,345.40	$........	$ 6,731.70
Investments	129,063.75	99,063.75	30,000.00	....
Current and Working	67,722.94	43,912.91	23,810.03	....
Prepaid Accounts	907.84	16,437.03	....	15,529.19
Total Assets	$543,308.23	$511,759.09	$53,810.03	$22,260.89
Liabilities	1,815.82	9,414.39	....	7,598.57
Surplus	$541,492.41	$502,344.70	....	....

Increase	$53,810.03
Decrease	22,260.89
	$31,549.14
Liability Decrease	7,598.57
Increase in Surplus	$39,147.71

The increase in surplus, $39,147.71, represents the net income for the year under review, particulars of which are recorded in Exhibit "B."

During the calendar year 1912 depreciation aggregating $16,024.55 has been written off the property accounts, as shown in Schedule "4." Of this $15,072.15 is applicable to the new building and machinery, plant, etc., while the balance, $952.40, is upon the old building, not now used in connection with the operations of the Association, but from which a rental revenue of $3,304.00 was realized. This is included in "Other Income," as shown in Exhibit "B."

EXHIBIT "A"

Balance Sheet as at Dec. 31, 1912.

ASSETS

Property and Plant:			
Real Estate and Buildings			$262,098.44
Machinery			56,582.52
Type and Metal			10,732.69
Furniture and Fixtures			13,839.25
Laboratory			1,160.80
Library			1,200.00
Total Property and Plant			$345,613.70
Investments:			
Bonds at Cost (Schedule "1")		$39,063.75	
Certificates of Deposit		90,000.00	
Total Investments			$129,063.75
Current and Working Assets:			
Material and Supplies as per Inventory		$19,192.45	
Accounts Receivable:			
Advertising	$17,370.74		
Reprints	871.05		
Directory—Third Edition	5,448.38		
Jobbing and Miscellaneous	3,838.70	27,528.87	
Notes Receivable		68.40	
Cash in Bank and on Hand:			
First National Bank of Chicago	$ 5,025.44		
Continental and Commercial National Bank of Chicago	13,802.98		
Cash on Hand	2,054.80		
Office Fund	50.00	20,933.22	
Total Current and Working Assets			67,722.94
Prepaid Accounts:			
Insurance		$ 844.04	
Minneapolis 1913 Session		63.80	
Total Prepaid Accounts			907.84
Total Assets			$543,308.23

LIABILITIES

Miscellaneous Accounts Payable		$ 203.01
Advance Payments on Publications		1,612.81
Surplus:		
As at Dec. 31, 1911	$502,344.70	
Net Income for Year ended Dec. 31, 1912	39,147.71	
Total Surplus		$541,492.41
Total Liabilities		$543,308.23

EXHIBIT "B"

Income and Profit and Loss Account for the Year Ended Dec. 31, 1912

Revenue:			
Membership Dues			$ 37,530.12
Journal Subscriptions			223,813.77
Journal Advertising			184,441.87
Profits Derived from:			
Jobbing			4,794.89
Books			4,663.48
Reprints			2,308.04
Buttons			471.02
Miscellaneous Sales, etc.			3,420.93
Gross Revenue			$461,444.72
Expenses:			
Journal Publication Expenses (Schedule "2")		$200,079.22	
General Expenses (Schedule "3")		136,934.17	
Provision for Depreciation (Schedule "4")		16,024.55	353,037.94
Net Revenue			$108,406.78
Other Income:			
Interest:			
On Bonds		$ 1,600.00	
On Treasurer's Account		1,888.87	
On Bank Balances		629.18	
Rentals—Building "A"		3,304.00	
		$ 7,422.05	
Loss on Bad and Doubtful Accounts and Notes, less Recoveries		1,024.90	6,397.15
Gross Income			$114,803.93
Deductions from Income:			
Association Expenditures—Schedule "5"		$ 59,188.65	
Biographical Index		8,093.54	
Third Edition of Directory—Loss on Publication		8,374.03	75,656.22
Net Income			$ 39,147.71

SCHEDULE "1"

Bonds as at Dec. 31, 1912

No.	Description and Particulars	Par Value	Book Value
5	Atchison, Topeka & Santa Fe Railway Co. 4 per cent. 100-year gold *bonds*	$ 5,000.00	$ 4,988.75
5	Atchison, Topeka & Santa Fe Railway Co. 4 per cent. 100-year gold bonds	5,000.00	4,532.50
5	Baltimore & Ohio Railway Co. 4 per cent. first mortgage bonds	5,000.00	5,032.50
5	Baltimore & Ohio Railway Co. 4 per cent. first mortgage bonds	5,000.00	4,767.50
5	Erie Railroad Co. 4 per cent. 100-year gold bonds	5,000.00	4,932.50
5	Reading Co. 4 per cent. general mortgage bonds	5,000.00	4,870.00
5	Reading Co. 4 per cent. general mortgage bonds	5,000.00	4,732.50
5	Union Pacific Railroad Co. 4 per cent. first mortgage bonds	5,000.00	5,207.50
	Total	$40,000.00	$39,063.75

SCHEDULE "2"

Journal Publication Expenses for the Year Ended Dec. 31, 1912

Wages		$ 82,718.05
Editorials, News and Reporting		9,782.93
Materials and Supplies:		
Paper	$ 94,603.79	
Ink	3,569.98	
Electrotypes	4,968.40	
Binding	176.76	
Miscellaneous Supplies	4,259.31	107,578.24
Total		$200,079.22

SCHEDULE "3"

General Expenses for the Year Ended Dec. 31, 1912

Salaries		$ 53,458.52
Postage:		
Journal—Second Class	$ 22,409.65	
General	15,911.84	38,321.49
Commissions:		
Journal	$ 6,958.08	
Buttons	202.91	7,160.99
Plant:		
Repairs and Renewals	$ 3,302.17	
Power	3,098.52	
Light	906.71	
Fuel	1,601.20	
Building Maintenance	2,060.57	
Supplies	3,739.84	14,709.01

Insurance and Taxes	5,150.76
Discount	3,245.68
Collection Commission	3,093.62
Express and Cartage	1,755.64
Agents' Salaries	1,167.00
Exchange	1,489.35
Legal	1,709.08
Office Supplies	743.63
Telephone and Telegraph	741.21
Reprints	206.78
Office Jobbing	3,161.76
Miscellaneous	819.65
Total	$136,934.17

SCHEDULE "4"

Provision for Depreciation for the Year Ended Dec. 31, 1912

Classification	*Rate*	*Amount*
Building "A"—Old	5 per cent.	$ 952.40
Building "B"—New	2.5 per cent.	4,774.23
Machinery	10 per cent.	6,286.95
Furniture and Fixtures	10 per cent.	1,123.81
Type	15 per cent.	813.31
Metal	20 per cent.	1,530.99
Factory Fixtures	10 per cent.	413.89
Laboratory Equipment	10 per cent.	128.97
Total		$ 16,024.55

SCHEDULE "5"

Association Expenditure for the Year Ended Dec. 31, 1912

Association	$ 18,302.75
Health and Public Instruction	18,360.02
Pharmacy and Chemistry	10,592.93
Propaganda	3,200.90
Medical Education	7,786.17
Session, 1912	945.88
Total	$ 59,188.65

We are pleased to report that the records of the Association are maintained in a careful and efficient manner, and we also desire to acknowledge the courtesies extended to us during the course of our examination. Yours truly,

Marwick, Mitchell, Peat & Co.,
Chartered Accountants.

Memory of Dr. C. A. Daugherty Honored

At the conclusion of the report of the Board of Trustees, Dr. Arthur T. McCormack, Kentucky, moved that when the House of Delegates does adjourn, it adjourn in honor of the memory of Dr. C. A. Daugherty, and that the Secretary be directed to convey condolences to Mrs. Daugherty.

Motion seconded and unanimously carried.

Dr. Alexander Lambert, New York, Chairman, read the Report of the Judicial Council, as follows:

Report of the Judicial Council

To the Members of the House of Delegates of the American Medical Association:

At the meeting of the House of Delegates held at Atlantic City, June, 1912, four subjects were referred to the Judicial Council by the House of Delegates:

1. The report of the committee to formulate amendments to the Constitution and By-Laws to extend membership, including the pending amendments to the constitution introduced in the 1911 session.

2. The invitation of the Australian Medical Society to members of the American Medical Association to attend its meeting in Auckland, New Zealand, in 1914.

3. The amendment to the By-Laws, Chapter 4, Section 5, providing for a Speaker for the House of Delegates.

4. The request of the House of Delegates that the Judicial Council investigate the secret division of fees and the giving of commission and the matter of contract practice, and recommend such action by the House of Delegates and the constituent associations as will remedy existing evils.

Considering these subjects in the order named, the Judicial Council desires to report:

First.—That it has carefully considered the matter of membership in the American Medical Association and the relation of this membership to membership in the constituent state and territorial bodies. Membership in any county society of any constituent body should legally, and does, constitute membership in the state body to which the county belongs and to the national body. Any physician, therefore, joining a county medical society of a constituent state or territorial body thus logically becomes a member of the American Medical Association. This has been specified in the proposed amendments by retaining the designation of member for all such members of the constituent bodies of the American Medical Association. The representation of each constituent body to the House of Delegates of the American Medical Association is calculated on this membership and on such membership is the organization of the American Medical Association founded. In this membership are some who are content to remain on this footing, but there are others who desire to go further and in this desire are willing to tax themselves by a definite annual fee by which they may maintain the scientific work and the scientific sessions of the American Medical Association, its Journal, and its manifold activities for the benefit of themselves, the other members of the American Medical Association and the profession at large throughout the United States. These members supporting the scientific work of the American Medical Association it seems wise to designate by some special appellation, and this is best fulfilled by the term "Fellows of the American Medical Association." With this explanation of the meaning of the differences between membership and fellowship, the Judicial Council recommends to the House of Delegates for their adoption the following substitute for the amendment to Article 3 of the Constitution, formally submitted to the House in 1911, and the following modification of the By-Laws:

Note.—The present wording of the parts of the Constitution and By-Laws is quoted below. The changes proposed are indicated by enclosing in brackets [ ] the words to be omitted and printing in italics those to be added. It will be noted in addition that there is a rearrangement of certain sections of the By-Laws.

Article 3.—Membership

The membership of this Association shall consist of [such members of the Constituent Associations and of such medical officers of the Army, of the Navy and of the U. S. Public Health and Marine Hospital Service, as shall make application in accordance with the By-Laws hereinafter provided] *the members in good standing in its constituent state and territorial associations.*

There shall be conducted by the American Medical Association a scientific session in which all members of the Association who qualify as hereinafter provided in the By-Laws as Fellows of the American Medical Association shall be privileged to participate.

BY-LAWS

Chapter 1.—Membership and Fellowship

Section 1.—Members.—*The members in good standing of the constituent state and territorial medical associations of the American Medical Association shall be members.* (Note.—See Sec. 4.)

Sec. 2. Tenure of Membership.—Membership in this Association shall continue only so long as the individual is a member in good standing of [the] *a* constituent association [of the state in which he resides.] When the Secretary shall be officially informed by the Secretary of the constituent association [of the state in which a member resides] *through which he holds membership in this Association* that the member is not in good standing, the Secretary shall remove the name of said member from the membership roll of the American Medical Association [and shall notify the member of the action taken, together with the reason therefor.] (Note.—See Sec. 5.)

Sec. 3.—Effect on Membership of Removal to Another State.—A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location, unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose *territory* such member has moved shall refuse him membership, *the member* shall be privileged to appeal to the Judicial Council of this Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal he shall retain his membership in the American Medical *Association through* his *original* state association. And provided further, that the term "the practice of *medicine*" throughout these By-Laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions.

Sec. 4.—[Members.]—*Fellows, Associate Fellows, Honorary Fellows.*—Any [physician reported as a member in good standing of a constituent association by the secretary of that association] *member of this Association,* who on the prescribed form shall apply for [membership] *fellowship* and subscribe for The Journal, paying the annual dues for the current year, shall be a [member] *fellow.*

Commissioned medical officers of the United States Army, United States Navy and the United States Public Health Service shall be [members] *fellows* of this Association so long as they are engaged actively in their respective service and thereafter if they have been retired on account of age or physical disability. These members shall not be required to [pay dues and shall not receive] *become personal subscribers to* The Journal of the American Medical Association [except by personal subscription.]

There shall be associate and honorary fellows who shall be elected and shall qualify in accordance with the provisions hereinafter set forth in these By-Laws.

Members, associate members and honorary members of this Association at the time of the adoption of this By-Law, shall be respectively fellows, associate fellows and honorary fellows; and in interpreting these By-Laws, "membership" in the Association at the time of the adoption of this By-Law shall be construed as fellowship.

Sec. 5.—*Tenure of Fellowship.—Fellowship in this Association shall continue only so long as the individual is a member. When the Secretary shall be officially informed that the fellow is not a member, the Secretary shall remove the name of such fellow from the fellowship roll of the American Medical Association and shall notify the fellow of the action taken, together with the reason therefor.*—(Note.—See Sec. 2.)

Sec. 6.—Delinquency.—Any [member] *fellow* who, for one year, has failed to pay his [annual dues], *subscription to* The Journal, shall forfeit his [membership] *fellowship* thirty days after notice from the Secretary has been mailed to his last known address.

Sec. 7.—[Membership] *Fellowship* Restored.—Any former [member] *fellow* who complies with Section [2] *4*, Chapter I, shall be *reinstated upon payment* of his [current] indebtedness, *including his subscription for the current calendar year.*

Sec. 7.—Associate [Members] *Fellows.*—The following may be elected in accordance with Section 4, Chapter VI, to associate [membership] *fellowship:* physicians who are members of the chartered national medical societies of foreign countries adjacent to the United States; *dentists* holding the degree of D.D.S. who are members of state or local dental societies, and pharmacists who are active members of the American Pharmaceutical Association; and representative teachers, students of sciences allied to medicine, resident in the United States and not eligible to regular membership. Associate [members] *fellows* shall enjoy the same privileges as regular [members] *fellows,* and shall be subject to the same *conditions.*

Sec. 8.—Honorary [Members] *Fellows.*—Physicians of foreign countries may be elected honorary [members] *fellows* by the House of Delegates in accordance with Section 4, Chapter VI.

Sec. 9.—Invited Guests.—Scientists, who are not [eligible to membership in the component society of the locality in which they reside] *engaged in the practice of medicine* may be invited, *with the consent of the secretary of the component county society of the locality in which they reside,* by the general officers or by the officers of a section, to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

Chapter II.—Registration

None but fellows, associate fellows, honorary fellows and invited guests shall be allowed to register or take part at the scientific meetings of the Association.

No [member] *fellow* shall be eligible to register at an annual session until he has paid all of his current indebtedness.

No [member] *fellow* shall take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office.

A [member] *fellow* on registering shall designate the section in which he wishes to be enrolled, but no [member] *fellow* shall register in more than one section at any annual session.

Business and Legislation

Chapter III.—Qualifications, Term, Apportionment and Registration of Delegates

Section 1.—Delegates must have been [members] *Fellows* of the American Medical *Association* Two Years.—No one shall serve as a member of the House of Delegates who has not been a [member] *fellow* of the American Medical Association for at least the two years immediately preceding the meeting of the House of Delegates at which he is to serve.

Change the words "member" and "membership" to "fellow" and "fellowship" throughout the By-Laws wherever such change is required to carry out the plan proposed of acknowledging the membership in the American Medical Association of *all members of component* societies and the establishment of the proposed fellowship in the American Medical Association.

Second.—The Judicial Council has expressed to Dr. J. W. Barrett of Melbourne, Australia, its appreciation of the invitation he extended on behalf of the trustees of the Congress and the University of Melbourne to the members of the American Medical Association to attend the Australian Medical Congress to be held in Auckland, New Zealand, in 1914. Members who are able to accept this invitation must leave in January, 1914, the trip requiring three months. Members who desire to make this trip will be furnished with letters of introduction to the New Zealand Medical Association and the Australian Medical Society announcing their membership *in the American Medical Association. Literature* concerning New Zealand and the trip, sent from Auckland, is in the hands of the secretary of the Association.

Third.—In considering the resolution offered that the amendment to the By-Laws, Chapter 4, Section 5, be *adopted:* That the House of Delegates, at its last session, shall elect a speaker who shall preside during the following twelve months and until his successor shall be elected, the Judicial Council desires to point out that there is a principle involved which is broader than the question *whether or not* there should be *a speaker elected for* the House of Delegates. This question is the wisdom *or power possessed* by one House of Delegates, half of whose *members* must be reelected to be present in the succeeding House, to elect a presiding officer *for* the succeeding House of Delegates. The Judicial Council considers that the wisdom of such action is questionable. It would *seem* that each House of Delegates is best able *to* elect its own speaker to preside at its deliberations, *and it* would seem wiser, if a speaker were *to be elected,* that he should be elected at the first session of the *House of* Delegates to preside over the succeeding meetings. Each House of Delegates thus would choose its own speaker, who, if desired, could hold over as an active officer until his successor was elected by the next succeeding House of Delegates. The House of Delegates has at present five presiding officers, i. e., the president and four vice-presidents. The House of Delegates now has it within its province to select at least one of the vice-presidents because of his ability and fitness to aid the president in presiding over the House. The Judicial Council, therefore, considers that this resolution brings up two questions, first, whether or not a speaker should be elected to preside over the House of Delegates, and second, whether this officer should be elected by each House of Delegates for itself to preside over its sessions or whether any given House of Delegates should elect a presiding officer for a succeeding House without this succeeding House having any say in the matter. The Judicial Council believes that it should not decide these questions. It, therefore, makes the following recommendation: that the House of Delegates shall choose a time and an hour at this meeting in which it shall sit as a committee of the whole to consider and decide these questions for itself.

Fourth.—The Judicial Council desires to make the following report concerning its investigation on the matter of secret division of fees, the giving of commissions and the matter of contract practice.

The Judicial Council in endeavoring to obtain information on these subjects believed that it was acting as an impersonal body to obtain information for the members of the American Medical Association as to the prevalence of these practices throughout the United States and the relative prevalence in each state and section of the country, and while gathering this information it desired also to obtain the opinions of the different members scattered in various sections regarding the apparent cause of these practices and also an expression of opinion from those who justified the practice and from those who condemned it. It was necessary, therefore, to send out some standard circular in which uniform questions could be asked that answers could be obtained from which uniform standards of judgment could be made. It was further evident that an impersonal investigation should not ask specific names and instances. The detective point of view of seeking guilt should not be the motive which prompted this investigation, but that of an impersonal, fair-minded seeker after knowledge. To obtain these ends the following circular was sent:

Dear Doctor:—The House of Delegates of the American Medical Association at the Atlantic City meeting held June, 1912, instructed the Judicial Council to investigate and report next June on the secret division of fees, taking of commissions, and contract practice. In compliance with these instructions, the Judicial Council is asking certain prominent members of the profession in all the states of the Union to answer the accompanying questionary. Your name will not be used or referred to as the source of any information you may give. While the citing of specific instances may seem wise to you, the Council at this time does not desire to make use of definite individual cases but wishes rather to obtain a general knowledge of the existence of these practices in the various communities in the different states and to estimate as accurately as possible the economic and social cause for these practices. The number which appears on the form for reply indicates the locality from which the reply is obtained, so that it will not be necessary for you to sign this information blank. The Judicial Council will greatly appreciate your cooperation if you will fill out the blank and return it in the enclosed stamped envelope to the Secretary of the Council, 535 Dearborn Avenue, Chicago.

Very truly yours,

Alexander Lambert, Chairman.
A. B. Cooke,
James E. Moore,
Hubert Work,
George W. Guthrie,
Alexander R. Craig, Secretary.

1. How prevalent is the secret division of fees (i. e., without the full knowledge of the patient) in your community?

2. Are you practicing one of the specialties? If so, what?

How often have you been asked during the year 1912 by those referring patients to you to divide the fee, or grant a commission?

How often have you been offered part of the fee or a commission for referring cases?

In how many instances was the patient acquainted with the terms according to which the division was to be made?

Can a secret division of fees or the granting of commissions be justified? If so, on what grounds?

3. In your locality, do the hospitals or sanitariums offer commissions for the reference of patients?

Do pharmacists offer or give commissions. Do houses furnishing medical or surgical supplies or appliances offer or give commissions?

Do you know of instances of physicians demanding any of the above commissions?

How prevalent is this practice?

4. What form of contract practice, if any, exists in your community?

(Kindly use the following division in answering this question, and give the terms of the usual contract so far as known, stating both the service required and the return made.)

(a) Mines
(b) Factories
(c) Railroads
(d) Lodges
(e) Municipal

5. What is (a) the cause and what (b) the effect on the profession of the secret division of fees?

Of taking or demanding commissions?

What economic or social conditions account for the contract practice that exists:

(a) Mines
(b) Factories
(c) Railroads
(d) Lodges
(e) Municipal

6. Are your answers to these questions based on personal knowledge or rumor?

A circular was sent to each president and to each secretary of each county society in every state in the United States and the various sections of the country were further apportioned off to the members of the Judicial Council who sent throughout their sections personal letters containing these circulars to various members of the profession whom the members of the Judicial Council knew to be prominent in their sections and who would be conversant with the public opinion and the practices of the various members of the profession in their communities. Some six thousand circulars were thus sent out and the replies received amounted to just over 50 per cent. of the circulars sent. Thus, considering the membership of the American Medical Association as seventy thousand, about 8 per cent. have been circularized and the report made is based on the answers and the knowledge obtained from some 4 per cent. of the total membership. This is approximately the same proportion of the American Medical Association which is usually present at the annual meetings and is equivalent to a reply from half that number.

The report may be further said to be based on the opinion of those officially representing the ultimate constituent bodies of the American Medical Association in the various states together with the pick of the prominent and active members selected in each state.

It may be justly said, therefore, to be a report founded on the representative opinion of the members of the American Medical Association.

From the statistics thus gathered it is evident that in the matter of secret splitting of fees, while the existence of the practice cannot be denied in any state, the degree of its prevalence varies greatly in different sections of the United States and the opinion of the local profession for or against it also varies in different regions. In the New England states—Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island—the practice is not prevalent though it exists to a slight degree in them all, being most prevalent in and towards the larger cities of Massachusetts and in that part of Connecticut that is near New York. In New York state the practice varies, some counties being nearly free of it, other counties and the large cities being filled with it. In New York City with its crowded population and with its large proportion of foreigners, in some sections of the city, among certain groups of men, it is without doubt the rule rather than the exception and this is true in spite of the increasingly strong opinion in the profession as a whole against the practice. In Pennsylvania it is a little less prevalent than in New York. New Jersey, Delaware, District of Columbia, Maryland, Virginia and West Virginia show a strong sentiment against it and not a great prevalence of the practice. Through the south generally the prevalence is not marked — Georgia, Arkansas, Texas and Tennessee showing a greater predominance of this practice than North and South Carolina, Kentucky, Mississippi, Louisiana, Florida and Alabama. Oklahoma on the other hand shows in strong contrast to other southern states in the great degree of its prevalence and in the stronger general opinion among the profession in its favor. Ohio, Indiana, Illinois, Iowa, Kansas, Missouri, Nebraska, North and South Dakota and Wisconsin show the greatest prevalence of this practice of anywhere in the United States and the profession is divided between a vigorous opposition to the practice and an equally cynical low standard justifying it. In Minnesota and Michigan the practice, though prevalent, is less widespread than in the other states just mentioned. Secret fee splitting is also fairly prevalent in Utah and Colorado. It is much less so in Arizona, New Mexico, Wyoming and Montana. It becomes prevalent again in Idaho, Washington, Oregon and is exceedingly prevalent in California.

It is interesting to note that in the replies given stating whether or not secret fee splitting was justifiable, there was 77.3 per cent. who answered in the negative, 13.4 per cent. who answered in the affirmative, and 9.3 per cent. who were doubtful.

By the term secret splitting of fees here used is meant the sharing by two or more men in a fee which has been given by the patient supposedly as the reimbursement for the service of one man alone. By secrecy is meant that the division of the fee is done without the knowledge of the patient or some representative of the family. It necessarily does not include any agreement between the patient or his representative made with one or more physicians or surgeons. It also does not include any payment to bona fide assistants with or without the knowledge of the patient or his representative. It does include, however, those cases in which the term assistant is used as a subterfuge to obtain a part of the fee which otherwise could not be rightfully claimed. The term commission here used refers to those rebates, "rake offs," or pro rata moneys sent for referring patients or favors received and not for medical and surgical services rendered to the donor by the receiver.

In the last twenty-five years surgery has developed to such an unprecedented degree compared with its former possibilities that it has entirely changed its relative position to other branches of medicine. Surgery *per se* compared with internal medicine to-day, as it appeals to the lay mind, is practically the difference between the abstract and the concrete. Surgery is a concrete service of a visible, definite kind easily appreciated by the same average intelligence which fails to appreciate any abstract service however valuable. There is no question that modern surgery has diminished the sum total of human suffering and has added to the average length of human life among the nations in which it is practiced to-day. The lay mind sees and appreciates it and is therefore willing to pay for its performance as the only practical return that can be made for the blessings that it gives. But surgery demands a knowledge of detail and a clearness of conception for its best performance, requiring both great manual dexterity and great brilliancy and acuteness of intellect to reach its highest perfection. As a logical sequence to this the pecuniary reward given to different surgeons for apparently the same service may vary greatly. All this is appreciated by the lay mind; it is unquestioned, its logic is recognized and the rewards that follow in this world's goods are naturally great.

On the other hand medicine has concerned itself and still concerns itself with the more abstract problems of inoperable disease and has cared for the nagging ailments of daily life and the intangible struggle against unseen infections, and it has shown its greatest triumphs in the prevention of disease. It has diminished and prevented an enormous amount of human suffering and it has far outstripped even surgery in its benefit to the race in the prolongation of the years of health and of human life. But great as the service has been, it is a negation compared to the positive action of surgery. The just appreciation of this service and these daily services that a physician gives requires a greater intelligence and a higher civilization than the average human being has reached or possesses. The fees therefore of the physician have lagged behind those of the surgeon and the worldly rewards in internal medicine are not as great as those of surgery. More than that, the rewards given to physicians are on the average given more grudgingly than to the surgeon. The surgical fees are enormously greater than they were twenty-five years ago; medical fees still remain practically the same, and except in a few large centers have hardly advanced at all. Oftentimes, especially in smaller communities, physicians giving their time, draining their personalities, giving of all that is in them, find that the sense of obligation to reward them for their service diminishes in direct ratio as a feeling of friendship from their patient increases, with the result that they cannot collect a fee for an honest, difficult, scientific diagnosis which results in the life-saving operation for their patient, while the surgeon who does the mechanical operation readily collects a relatively large fee.

The value of the services of the general physician are still misunderstood, are still estimated far below their worth. Added to this the economic pressure on the physician to live on a small income and care for his family is becoming increasingly difficult. It is easy to understand, therefore, that under the strain of the struggle for existence, the physician, seeing his more fortunate brother obtain relatively large fees for apparently easier work, should be filled with envy and his sense of moral obligation and his duty to his patients should suffer in consequence. On the other hand, taking into account the competition among the surgeons for opportunities to work, with a desire to increase their clientele and income, it is easy to understand how they have stifled their consciences and have yielded to the temptation to bid for the work of their wavering confrères. Excuses are easily thought of and easily made. The lower morals and lower standards of the average commercialism which they see around them are easily copied. The younger surgeon desiring to start will make his bids to split his fees and will gain a bigger clientele and become more quickly established. Physicians unable to collect their fees will endeavor to throw the responsibility on the surgeon and obtain through him, as a partial collector from their clients, the moneys which they should collect for themselves directly from their patients. The result is demoralizing to them both. The patient is brought to the surgeon who will split off to the physician the greatest percentage of his fee irrespective of whether or not that surgeon is the best one to perform that operation on that given patient. Furthermore, the temptation soon arises to operate unnecessarily that the surgeon may have his fee and that the physician may obtain his share. From what at first seems but a harmless endeavor to collect part of uncollectable moneys due him for his work, the physician may find himself in the unhappy position of having degenerated into one who dishonestly is exploiting his patient for an unnecessary operation that he may share the proceeds of a dishonorable act. The surgeon who aids and abets in these practices or who trusts to the size of his bid to increase his surgery, has demeaned himself and has equally degenerated from an honorable to a dishonest man.

It is interesting to note the reasons given for this secret fee splitting, as justification, in the statistics which form the basis of this report. One of the commonest reasons is that it is justifiable because of the disproportionate fee between the amount paid the surgeon and the amount paid the physician who has made the diagnosis and referred the patient to the surgeon. This is on the basis that a wrong has been done the physician because his services are not as well paid as the surgeon's. But two wrongs never yet made a right, and the further wrong doing of taking a patient to a surgeon because he will split the most generously does not remedy or make up an injustice however great to the physician. The physician's remedy is along other lines, not one of dishonesty to his patient in which he betrays him according to the size of the fee obtained. Another reason given is that it is nobody's business what a surgeon does with his fee after he has earned it. But it is the patient's business to know for what he is paying, whether it is that he is paying for the best work obtainable from the best man to perform that work or whether he is paying an inferior man to consummate a dishonest bargain with his physician, and the patient has a legal and a moral right to know which he obtains. Many other reasons are given, all of them expressing in some change of thought and language that the splitting of a fee is justifiable because the patient will pay more readily for the work of a surgeon than for the work of the family practitioner, all of them containing the same fallacy that it is justifiable to exploit a patient for all the money that can be squeezed out of him and not on the basis of giving the best service possible. Other reasons are that fee bills charge too little for medical skill and too much for surgery. Here, too, the remedy lies in the hands of physicians themselves and gives no justification for the exploiting of patients. Other answers are more frankly truthful, such as "purely on the grounds of good business," and "because every one else is doing it," and "unless you do some other man will." These frankly but tacitly admit the low standard of commercialism on which these men have put their profession.

Commissions are of two kinds. First are those which are given pro rata by a consultant for every patient sent to him. This practice is more commoin in some localities than in others. In one large city it is not uncommon among a certain group of men. Some of them frankly admit that they earn their bare living with their practice, but their main income comes as a steady return from the consultants to whom they send patients, these consultants rendering a definite amount at the first of each month for each patient sent. This, of course, is just plain cynical, dishonest exploitation of the patient. A patient is sent to the man who is willing to be the most dishonest and give the biggest commission and charge the patient for his services according to the ratio of the split he must make and not according to service alone. There is again no consideration whether the patient will receive good or inferior treatment from such consultant.

The other kind of commission is that which is received by physicians from pharmacists or from instrument houses or those commercial houses furnishing medical or surgical supplies and appliances. This form of commission, unfortunately, is exceedingly wide-spread, especially in prescribing or supplying elastic stockings, trusses, belts, braces and similar articles. It is immaterial whether a certain definite commission is sent regularly as each patient is referred, or whether the patient is charged a high retail price for the apparatus and the difference between the retail and the wholesale price to the trade given to the referring surgeon. It is exploiting a patient and obtaining money for service not rendered. The surgeon does not give the appliance to the patient; the patient buys it from the commercial house and the surgeon has already charged his fee for his advice and his services to the patient. This is grafting on the commercial house for an added fee to be taken from the patient who is supposed to be buying an instrument at a fair price and who is not supposed to be further adding an underhand fee to the surgeon. It is dirty graft, pure and simple, to the disgrace of men who practice it.

There is another form of commission and that is the rebates offered by hospitals or sanatoriums to those sending patients. This has become so wide-spread that many hospitals in their circulars openly offer commissions to those who will send them patients. In some localities those commissions are taken for granted and physicians will call up before sending their patients to these hospitals and sanitariums and ask to be informed of how much rake off they are to obtain—15 or 20 per cent. or even more. In New York 15 per cent. is the usual amount demanded among those given to this practice. This is the same dishonest exploitation of a patient. The patient goes to this hospital supposedly paying for service he is to receive, and it is a dishonest betrayal of a patient to take from him in an underhanded way moneys which have not been earned. This cannot be justified; it is straight dishonesty.

All medical practice is contract practice either implied or expressed between the physician and the patient if the patient be of legal age, or between the physician and the parents or guardians of a minor. There is no reason in law or morals why a physician should not enter into a contract with an individual, firm or corporation, provided that the contract be an honorable one for the performance of an honorable act and not interfering with the rights of others. Contract practice here considered is not the contract usually implied but which at times may be definitely stipulated between the physician and the individual patient. The other forms of contracts into which physicians enter are those between the physician or surgeon and business corporations such as railroads, mining, manufacturing and life insurance companies. In another class are those between medical men and benevolent or fraternal associations, the so-called lodge practice. Another kind of contract is that between physicians and the industrial insurance companies. The lodge practice and the industrial insurance work stand out distinctly on a different basis from the other contracts with economic corporations. The contracts made between physicians and economic corporations are necessities in our present stage of economic development. Surgeons and physicians are employed by these corporations partly as a matter of self-protection that they may properly care for the accidents occurring in the transaction of their business and that they may be protected against unjust damage suits that are likely to occur, for should they not be so protected it is possible for these companies to be wiped out of existence in a few years by the enormous mass of damages brought against them. Besides this self-defence of the company, there is a growing appreciation by large corporations that the better the health of their employees is protected the better will be the results obtained in their work, and hence while it may tend toward benevolent and socialistic ideas, it is really a question of economic efficiency. Further, many lumber and mining camps are widely distant from towns and places where physicians would naturally settle and these camps need some medical man to care for the men employed. All such contracts as these are necessities and should be recognized as such, the only question arising being the details of the contracts and the fairness of the remuneration given. If medical men are poorly paid and paid below the possibility of a fair living wage, they give poor service in return and there is a law of diminishing returns even in the matter of medical services. Poor, underpaid medical service, is a foolish and expensive economy to corporations.

In the matter of lodge practice and fraternal and benevolent societies, another situation arises, namely, the question of health insurance. Medical attendance in the lodges and fraternal and benevolent associations is a part of the inducement for the joining of these associations. There is a point in wage earnings at which these lodge medical services are not economic necessities, but on the other hand there is a point in wage earnings at which the ratio of fixed charges to total income is such that these fraternal societies do become an economic necessity in the sense of health insurance. The late Dr. Bristow, in an address before the New York Academy of Medicine, strongly emphasized this point of view. He further showed that in the United States the annual income of adult males is in 90 per cent. less than $800, in 75 per cent. less than $600, and in fully 50 per cent. less than $500, with 20 per cent. earning as low as $200 per annum. It further is a noticeable fact that the smaller the income the larger the family. There is no question that the fixed charges for necessities against a small income are a large proportion of the total of that income. Moreover, with the poor earning their living by a daily wage, if sickness comes on them their income ceases and whatever savings they may have been able to scrape together quickly vanish for the mere necessaries of existence. In cities these necessities for medical attention are met by the free dispensaries and free hospitals and the mass of population has become medically pauperized through the sheer necessities of their environment. On the other hand, the result on the medical profession of this economic situation is that hardly more than 10 per cent. of the physicians in the United States are able to earn a comfortable income. The medical profession finds that an adequate medical education requires of students a constantly increasing length of time and of money for its attainment. It is the most costly of all the learned professions, and with living expenses constantly increasing and with the physician's opportunities of earning a livelihood from the general population constantly diminishing, and further with the profession devoted to self-immolation by its constantly increasing development of preventive medicine and sanitation, we are forced to consider the situation as one produced by economic forces and that lodge practice under certain circumstances is one of health insurance that must be accepted and controlled, not condemned and shunned. No one questions the right of any man to take out a health policy in an ordinary health insurance company. No one questions the right of that man by this policy to pay from $60 to $300 a year as an insurance against his possibility of accident or disease and possible temporary or permanent invalidism occurring to him in the work peculiar to the medical profession. How then does this differ from the dollar a year that members of the lodges and societies pay for the privilege of obtaining medical services and care in accident and sickness if these misfortunes come to them? There is no difference in principle; there is no difference in the economic necessity of it. As such it should be recognized and treated. The question comes down then to the designation of the weekly or monthly income at which this should be treated as an economic necessity and above which it is an economic luxury. These economic conditions have been reached in the countries of Europe and have recently caused a vigorous struggle between the medical profession and the government in England. It is useless to struggle with "whereas's and resolutions" against these economic facts. It is time for the American Medical Association and its constituent bodies to look these facts squarely in the face, to accept them and by instituting fair control to see that justice is given to the members of their profession and that an equal social justice is given to the poor whose necessity demands this sort of service.

The necessity for action to remedy the evils of secret fee splitting and giving and receiving of commissions is self evident. Those who are indulging in these practices are bringing the whole profession into disrepute. Many beliefs and standards of society are on trial and the standards of the medical profession are being judged by the public and weighed in the balance. Heretofore the profession has always endeavored to render to all men its best services irrespective of the rewards received. If through secret fee splitting and commissions the standards of the medical profession are changed from giving to patients the best service possible to squeezing from them the biggest attainable fees, then will the medical profession be deemed to have been weighed in the balance and found wanting. The confidence and respect now given it by the public will be destroyed.

The remedies for the conditions here discussed lie partly in the hands of the American Medical Association, partly in the hands of the constituent state and county bodies and partly in the hands of the medical profession as individuals. The secret splitting of fees and the giving or receiving of commissions are best remedied by the profession announcing that it demands publicity in all transactions between patients and the members of the profession and refuses to sanction the retention on the roster of any of its organizations the names of those who are proved guilty of these practices.

The teaching of the ethics of the medical profession and of the high standards held by this profession should be given to each medical student before graduation. The young men should not be turned loose on the world ignorant of the high ideals and standards which the medical profession always has and always will stand for. Many young men have yielded to the temptation of commercialism because they were ignorant of higher professional standards and knew only the commercial standard of *caveat emptor*—"let the buyer beware." The rules of *caveat emptor* are out of place in the dealings of the medical profession. The physician has himself to blame who, through failure to put a just appraisal on his services and to demand a just reward for them, and who, through failure of endeavor to collect his just deserts, finds himself unappreciated and unrewarded. The foolish ancient idea that accounts must be sent out but once or twice a year, lax systems of accounts and collections, have much to do with the small incomes of many physicians. The human mind appreciates most those things obtained through struggle and for which a price has been given. It appreciates least those things which have come unsought and unpaid for. In a physician's service human sympathy, kindliness and sturdy friendship are thrown in for good measure to time spent and knowledge given, and though desirable, are imponderable and are to be left unmeasured. But time and knowledge can be measured and used for basis of recompense, and although it may seem an abstract service, it is one the public can appreciate and can be educated to realize that it has a value as high as things tangible and concrete. Surgeon's fees are based on a broader consideration of the value and amount of service rendered than are those of physicians. But the latter are expected to charge the same for a call to relieve a sniveling coryza as one to relieve the pains and dangers of angina pectoris. For this reason the fees of surgeons are likely to remain near their present level but the fees of physicians must gradually change and grow to be more in proportion to services rendered than at present. Lack of frankness between the profession and their patients and lack of friendly assistance between surgeon and physician in discussing with patients the business side of the services given, are fertile sources of misunderstandings and opportunities of sly practices, while the reverse is equally true that frankness and definite understandings between medical men and patients prevent these evil practices.

The replies received by the Judicial Council on the matter of contracts in mines and railroads and factories show that in some states the contracts are just and that the recompense to the physician is in ratio to services rendered and is adequate in amount for such services. On the other hand there are other replies which show the reverse. The Judicial Council believes the remedy for these evils resides in the county societies, that these societies should use their influence and power not to condemn the physician who must take the contract by ostracizing him, but to prevent underbidding for these contracts below what would give a fair reward for medical services rendered. So, too, in the matter of lodge practice, the Judicial Council believes it to be the duty of the local county societies to endeavor to reform and not alone to condemn the abuses of lodge practice. These abuses are many and are unfair alike to the medical man and to the lodge members. But because lodge practice is the expression of health insurance it must sooner or later be faced. The British Medical Association has faced these problems and the American Medical Association will do well to consider seriously similar action. Properly controlled, the lodge practice should bring an adequate service to its members and an equitable remuneration to the medical man. The details, however, are to be left to each locality and county society. From the experience of the British Medical Association it is evident that there should be an income limit (put at ten dollars a week in England), free choice of doctor by patient among the doctors under contract, and consent of doctor to act, the medical profession to be in control and to administer the medical and maternity benefits and the medical remuneration to be what the profession considers adequate ($2.12 in England) and the method of remuneration of the medical practitioner adopted by each local health committee to be according to the preference of the majority of the medical profession in that locality.

The Judicial Council recommends for adoption by the House of Delegates the following resolutions:

Resolved, That any member of the American Medical Association found guilty of secret fee splitting or of giving or receiving commissions shall cease to be a member of the American Medical Association.

Resolved, That the House of Delegates of the American Medical Association recommends to each constituent body that it endeavor through the action of its various county societies to reform the various abuses of lodge practice in their separate communities in order that the lodges may give an adequate service to its members and an honorable remuneration to the medical men.

Respectfully submitted,
Alexander Lambert, Chairman.
A. B. Cooke.
James E. Moore.
Hubert Work.
George W. Guthrie.
Alexander R. Craig, Secretary.

On motion, the various sections of this report were referred to the appropriate committees.

Dr. Henry B. Favill, Illinois, Chairman, presented the report of the Council on Health and Public Instruction, as follows:

Report of the Council on Health and Public Instruction

To the Members of the House of Delegates of the American Medical Association:

The Council presents herewith its third annual report.

In accordance with the plans of the Council, as outlined in the report of last year, in which the Council declared that, in its judgment, its principal mission is the development of public confidence in the purposes and the work of the American Medical Association and of the profession, the Council has continued the work begun last year, at which time the following activities were outlined:

1. Continuation and extension of the Press Bureau.
2. Organization of a Speakers' Bureau.
3. Compilation of a handbook for speakers with other literature necessary for the Speakers' Bureau.
4. Organization and development of a Bureau of Literature.

PRESS BUREAU

The Press Bulletin has been continued throughout the past year, a weekly bulletin being prepared and mailed to approximately five thousand newspapers and publications. During the year from June 1, 1912, to June 1, 1913, forty-four press bulletins have been issued, with an average circulation of 4,763. The effect of this bulletin on the newspapers of the country is apparent. Not only are the items contained in the bulletin more generally used than in previous years, but there has been a marked changed in the attitude of the press toward the medical profession and the Association. Editorials criticizing physicians as a class are by no means so common as they were in previous years, while an increasing number of newspapers use the press bulletin material regularly and as texts for editorials. One gratifying indication of this change of attitude is that during the past year a number of publications which were not receiving the bulletin have asked to have it sent to them, while out of nearly 5,000 publications to which it has been sent, only five have asked to have it discontinued. As the methods of handling the bulletin, as well as its contents, were exhaustively discussed in previous reports, it is not necessary to go into further details on this subject.

SPEAKERS' BUREAU

In the report for 1912 appeared the plans for the organization of a Speakers' Bureau, as well as a report on the experimental operation of such a bureau, from January 1, 1912, to May 1, 1913. As was stated, the principal object sought at that time was to secure experience as to the best methods of handling such a bureau, also to devise methods by which the correspondence with speakers, local committees, etc., could best be handled.

Following the session of 1912, an enlarged list of speakers was compiled, containing carefully selected names distributed as widely as possible throughout the country. Each of these speakers was asked to fill six appointments from Oct. 1, 1912, to May 1, 1913. An announcement, in the form of an attractively gotten up pamphlet, was prepared, containing the names of the speakers, their subjects and the conditions under which they would speak, directions for securing a speaker, application blanks, etc. This pamphlet was mailed on Oct. 19, 1912, to the secretaries of all local medical societies, women's clubs, colleges, universities, normal schools, Chautauquas, state superintendents of education, and others, as follows:

Secretaries of local medical societies	1,986
Secretaries of women's clubs	6,136
Secretaries of colleges, universities, etc	636
Principals of normal schools	331
Chautauquas	301
State superintendents of education	49
Miscellaneous, including secretaries of state societies, officers and members of permanent committees of the American Medical Association, etc	1,955
Total	11,394

Owing to the late date at which the announcement was mailed, many of the organizations had completed their programs for the coming winter. In spite of this, however, a large number of requests were received. Speakers have been furnished under the following conditions: that the meeting should be held under the auspices of a local committee, representing all the organizations in the town interested in public health; that the meeting should be well advertised and should be open to the general public; and that the local committee should bear the expenses of a meeting place and of advertising. On these conditions speakers have been furnished for 213 meetings held in the seven months from November 1, 1912, to June 1, 1913. Many requests have been denied, either because the invitation came from a single organization or because the town was too small and the audience offered would not justify the expenditure. The revision of the list of speakers and the preparation of an announcement for the coming season is now being carried on.

SPEAKERS' HANDBOOK

As soon as requests for speakers began to come in, the secretary began to receive requests from various speakers for information and statistics on different subjects. In order to supply speakers with the needed facts in convenient form, the Council authorized the preparation of a speakers' handbook. Chapters were compiled on the more important preventable diseases. Owing to the demand, the book was issued in the form of two pamphlets, which contained various chapters in the order of their compilation, as follows: Yellow Fever, Bubonic Plague, Typhoid Fever, Tuberculosis, Diphtheria, Acute Anterior Poliomyelitis, Meningitis, Infant Mortality, Small-pox and Vaccination, Asiatic Cholera, Scarlet Fever, Typhus Fever, Pellagra, Malaria, Hookworm, Vital Statistics, the Development of Scientific Medicine in the Nineteenth Century. Additional chapters on Venereal Disease, Medical Martyrs, School Hygiene and School Inspection have since been prepared and will be included in the next edition of the handbook, in which the chapters will be arranged in a more logical order. This book has been sent to all speakers, as well as to others interested in public health and public education.

PAMPHLET FOR LOCAL COMMITTEES

Experience has shown that it is impossible to secure results from public health meetings no matter how able the speakers may be unless a carefully planned campaign of advertising and publicity is carried on before each meeting. Experience gained during eight years of management of Dr. J. N. McCormack's meetings has demonstrated the value of certain methods and the uselessness of others. In order that the best possible results may be secured, it is necessary that the local committee in charge of the meeting follow definite instructions. For the information of local committees a small pamphlet of fourteen pages has been prepared, entitled, "How to Hold a Successful Health Meeting, or Suggestions to Local Committees in Arranging for a Public Health Meeting." This pamphlet contains specific instructions on how to organize a local committee, how to secure united public support, how to secure speakers, what kind of a meeting place to secure, how to advertise the meeting, what arrangements to make for the meeting itself, how to secure the best results after the meeting, etc. This pamphlet is sent to all members of local committees, as well as to all persons who make inquiry regarding the work of the bureau. It also contains facsimiles of window cards, posters, personal invitation cards, etc.

The devising of a duplicate card index system by which the appointments for each speaker are kept on one card and the appointments for each town on another, and the preparation of a system of form letters completed the machinery of the speakers' bureau. The plan now followed is generally about as follows: An inquiry is received from a secretary of a medical society, woman's club, or other organization, asking whether a speaker can be furnished for a certain date. In reply a copy of the announcement and the pamphlet of suggestions is sent, together with a statement of the conditions under which a speaker will be furnished. This is usually followed by the organization of a representative local committee of arrangements, the securing of a meeting place, the selection of a date and an application for a speaker. Local committees are asked to indicate a first, second and third choice, so as to avoid delay and correspondence. The invitation, giving the place and date, is then placed before the speaker asked for, and correspondence carried on until the satisfactory arrangements are made and the date is closed. At least three and, better, four weeks are necessary after all arrangements are made in which to advertise the meeting and arouse public interest. Hastily arranged meetings have, almost without exception, proved failures. Copies of the pamphlet of instructions are sent to all persons interested and efforts at publicity, proper advertising, etc., are stimulated by correspondence. Following the meeting the speaker is asked to report on the character of the audience, the nature of the arrangements and the evident impression made, while the chairman of the local committee of arrangements is asked to report on the character of the address, its appropriateness, the manner of its reception, together with newspaper facts and editorial comments following the meeting.

In the light of the experience of the past seven months the most promising fields for this work seem to be women's clubs, normal schools, colleges and other educational institutes and Chautauquas. Teachers' institutes and farmers' institutes, alliances and granges were not included in the plans for the past year owing to the difficulty experienced in securing a complete list of these organizations. They can probably be included in plans for the coming year.

In developing this work the Council needs the support of the members of the Association and especially needs more volunteer speakers. In the Western states, especially where distances are great and the population scattered, more speakers are needed for each state than in the more densely populated Eastern states. Many of the appointments during the past year have been filled by speakers at considerable self-sacrifice. If the work is distributed among a larger number of speakers it will be much easier to meet the calls made on the bureau.

STATE COMMITTEES RECOMMENDED

As this work develops it will be manifestly impossible for speakers to be supplied from the headquarters' office of the Association to fill all the appointments. Many of the requests come from towns too small to justify the expense of sending a speaker from any considerable distance. In the smaller communities members of local county societies who desire to take up this work could meet the demands quite as well as the speakers from the bureau. The supplying of speakers for such places is clearly a function of the state society. No amount of expense is involved, as speakers could be secured from the same town as that in which the meeting is to be held, or one near by. To attempt to handle the details of such a large number of meetings through the central bureau would involve too much detail and correspondence. This work is of the utmost importance and should be taken up, however, by each state society.

The Council, therefore, recommend that each state, which has not already done so, be asked to establish a standing Committee on Public Education, either as a separate committee or in conjunction with other duties, and that this committee have oversight of the work of furnishing speakers for the state, calling on the Speakers' Bureau of the American Medical Association to furnish speakers from a distance for the larger and more important meetings. By such a division of work, the activities of the Association in this direction could be greatly extended. Each state committee could call on the Speakers' Bureau of the American Medical Association to furnish speakers for from five to ten meetings in each state during the year, leaving the remainder of the meetings to be addressed by local speakers furnished by the state committee direct. This plan would also put the management of these meetings under the jurisdiction of the state societies, and would make the work of public education a function of each state association. Literature, methods and suggestions can be furnished by the central bureau, which would then be able to keep in touch with the situation throughout the entire country by corresponding with the chairmen of the various state committees.

BUREAU OF LITERATURE

The organization and conduct of the Speakers' Bureau, the preparation of the handbook and other activities of the Council have prevented the elaborate development of a bureau of literature. The following pamphlets, however, have been issued during the last ten months:

1. The Influence of Antivivisection on Character. By Dr. W. W. Keen, Philadelphia. Being Pamphlet No. 24 of the Defense of Research Series.
2. Antivivisection Legislation: Its History, Aims and Menace. By Dr. Walter B. Cannon, Boston. Being Pamphlet No. 25 of the Defense of Research Series.
3. A Program for Local and State Organizations for the Suppression of Tuberculosis. By Dr. J. W. Pettit, Ottawa, Ill.

4, 5, 6 and 7. A series of four pamphlets by Dr. Winfield S. Hall, Chicago, on Sex Hygiene for Boys and Girls.

8. The Pasteurization of Milk. By Prof. E. O. Jordan of the University of Chicago.
9. Why Should Births and Deaths Be Registered? A Revision of the Vital Statistics Pamphlet Containing the Model Law.
10. Death and Blindness from Wood-Alcohol Poisoning. By Dr. Casey A. Wood, Chicago.
11. Progress in Sterilization Legislation. Compiled by the Medicolegal Bureau.
12. Medical Inspection of Schools; A Summary of Existing Legislation. Compiled by the Medicolegal Bureau.
13. Laws Prohibiting Fraudulent Advertising. Compiled by the Medicolegal Bureau.
14. State Regulation of Marriage. Compiled by the Medicolegal Bureau.

The Council has in process of development a plan for the publication of a series of pamphlets on preventable diseases and other subjects in cooperation with the various state boards of health. This plan was submitted to the state boards by correspondence and has been endorsed by thirty-six of the forty-eight boards of health. Further details will be presented in a subsequent report.

CARTOONS

During the past year the forty-eight cartoons which have appeared in The Journal have been reproduced either on large sheets of cardboard, 22x28, for exhibition purposes, or in the form of stereotype plates, suitable for use in newspapers, magazines, etc., and have been furnished to those desiring them either singly or in sets at a cost price of 35 cents each.

LANTERN SLIDE BUREAU

The organization of a bureau for loaning lantern slides to speakers, local societies and others, has been begun but is not yet sufficiently advanced to render a definite report possible at this time.

PLANS FOR 1913

At the meeting of the Council held October 19, 1912, the Secretary presented four propositions for consideration for 1913. These were:

1. The preparation of standard pamphlets for state boards of health referred to above and discussed in previous reports.

2. A survey of the work and equipment of the various state boards of health, with a view to securing information which will enable the Council to compile a report showing exactly what is being done for the advancement of public health through governmental agencies, and how much this work is costing.

3. A conference of executive officers of the leading organizations to discuss mutual cooperation and proper division of the field, with the elimination of unnecessary organizations and the coordination of existing activities.

4. The establishment of a legislative and medicolegal bureau at the headquarters of the Association.

CONFERENCE OF PUBLIC HEALTH ORGANIZATIONS

The first two subjects are still under discussion. On the third proposition the Council authorized the Secretary to correspond with the executive officers of the various national organizations interested in public health, with a view to calling a conference of those interested. Three circular letters were sent out to all organizations interested in such work so far as could be ascertained. About fifty organizations were invited as follows:

ORGANIZATIONS INTERESTED IN PUBLIC HEALTH TO WHICH AN INVITATION WAS SENT

American Red Cross Association. Ernest P. Bicknell, National Director, Washington, D. C.

Russell Sage Foundation. John M. Glenn, Director, New York City.

General Federation of Women's Clubs. Mrs. S. S. Crockett, Chairman, 710 Belmont Avenue South, Nashville, Tenn.

American Association for the Study and Prevention of Infant Mortality. Mrs. Gertrude B. Knipp, Executive Secretary, 1211 Cathedral Street, Baltimore, Md.

American Association for the Study of the Feeble-Minded. Dr. A. C. Rogers, Secretary, Faribault, Minn.

American Public Health Association. Selskar M. Gunn, Secretary, 755 Boylston Street, Boston, Mass.

American Society of Sanitary and Moral Prophylaxis. Dr. Prince A. Morrow, President, 66 West Fortieth Street, New York City.

National Association for the Study and Prevention of Tuberculosis. Dr. Livingston Farrand, Executive Secretary, 105 East Twenty-Second Street, New York City.

National Association for the Study of Epilepsy. Dr. J. F. Munson, Secretary, Sonyea, New York.

National Child Labor Committee. Owen R. Lovejoy, Secretary, 105 East Twenty-Second Street, New York City.

American Association for Labor Legislation. Dr. John B. Andrews, Secretary, 131 East Twenty-Third Street, New York City.

Metropolitan Life Insurance Company. Dr. Thomas H. Willard, Medical Director, New York City.

Prudential Insurance Company. Dr. Walter A. Jacquith, Medical Director, Newark, N. J.

National Committee for Mental Hygiene. Clifford W. Beers, Secretary, 50 Union Square, New York City.

Ætna Insurance Company. Mr. C. E. Gilbert, Secretary, Hartford, Conn.

Association of Life Insurance Presidents. Robert Lynn Cox, General Counsel and Manager, 1 Madison Avenue, New York City.

Conference of State Provincial Boards of Health. Dr. H. M. Bracken, Secretary, Capitol Building, St. Paul, Minn.

Equitable Life Assurance Company. Dr. F. O. Wells, Medical Director, 165 Broadway, New York City.

National Conservation Congress. Thomas R. Shipp, Executive Secretary, Indianapolis, Ind.

National Woman's Christian Temperance Union. Mrs. Frances P. Parks, Secretary, 1730 Chicago Avenue, Evanston, Ill.

The Survey. Dr. Edward T. Devine, Editor, 105 East Twenty-Second Street, New York City.

National Breeders' Association. Hon. W. M. Hays, Secretary, Washington, D. C.

National Grange of the Patrons of Husbandry. Oliver Wilson, Master, 214 Callender Avenue, Peoria, Ill.

American Institute of Criminal Law and Criminology. Eugene A. Gilmore, Secretary, University of Wisconsin, Madison, Wis.

Postal Life Insurance Company. Dr. Eugene L. Fisk, Medical Director, 35 Nassau Street, New York City.

American Academy of Medicine. Charles McIntire, Secretary, Easton, Pa.

American Medical Association. Council on Health and Public Instruction, Dr. Frederick R. Green, Secretary, 535 North Dearborn Street, Chicago.

American School Hygiene Association. Dr. Thomas A. Storey, Secretary, Convent Avenue and One Hundred and Thirty-Ninth Street, New York City.

Committee of One Hundred on National Health. Miss F. Robbins, Executive Secretary, 105 E. 22d St., New York City.

National Council of Education of the N. E. A. Dr. Thomas D. Wood, Chairman, Columbia University, New York City.

United States Public Health Service. Rupert Blue, Surgeon-General, Washington, D. C.

Health Committee, American Association for the Advancement of Science. Prof. L. O. Howard, Permanent Secretary, Smithsonian Institute, Washington, D. C.

The Penn Mutual Life Insurance Company. Dr. Harry Toulman, Philadelphia, Pa.

The Rockefeller Sanitary Commission. Dr. Wickcliffe Rose, 725 Southern Building, Washington, D. C.

Bureau of the Census. Dr. Cressy Wilbur, Chief Statistician, Washington, D. C.

The American Federation for Sex Hygiene. Dr. James H. Foster, Assistant Secretary, 105 West Fortieth Street, New York City.

The American Museum of Safety. Dr. W. H. Tolman, Director, 29 West Thirty-Ninth Street, New York City.

Efficiency Society. Mr. H. F. J. Porter, Secretary, 29 West Thirty-Ninth Street, New York City.

American Statistical Association. Mr. Carroll W. Doten, Secretary, Boston, Mass.

The Actuarial Society of America, New York City.

American Iron and Steel Institute. Dr. Thomas Darlington, Secretary, 30 Church Street, New York City.

Playground and Recreation Association of America. Mr. H. S. Braucher, Secretary, 1 Madison Avenue, New York City.

American Physical Education Association. Dr. J. H. McCurdy, Secretary, 93 Westford Avenue, Springfield, Mass.

American Association of Societies for Organizing Charity. Mr. Maurice Willows, Associate Secretary, 105 East Twenty-Second Street, New York City.

The Scientific Temperance Federation. Cora Frances Stoddard, Corresponding Secretary, 23 Trull Street, Boston, Mass.

The Association of Life Insurance Medical Directors. Dr. Faneuil S. Weisse, Secretary, 34 Nassau Street, New York City.

The American Breeders' Association. Mr. C. B. Davenport, Secretary, Cold Spring Harbor, Long Island, N. Y.

National Commission on Milk Standards. Dr. Charles E. North, Consulting Sanitarian, 30 Church Street, New York City.

American Civic Association. Mr. Richard B. Watrous, Secretary, 913 Union Trust Building, Washington, D. C.

Department of Labor, Children's Bureau. Miss Julia C. Lathrop, Chief of Bureau, Washington, D. C.

As a result of this correspondence the Council authorized the Secretary to issue an invitation for a conference in New York. This was held at the headquarters of the American Association for Labor Legislation on April 12, officers representing thirty-nine organizations being present. The conference was called to order by Dr. H. B. Favill, chairman of the Council. Mr. John M. Glenn of the Russell Sage Foundation, New York City, was elected chairman, and Dr. John B. Andrews of the American Association for Labor Legislation, secretary. After an exhaustive discussion of the situation in which the need of better organization and coordination was generally admitted, the conference adopted a resolution offered by Prof. Irving Fisher, authorizing the chairman to appoint a committee of fifteen, to consider the entire question of public health activities and the ways in which they could be improved, and to report its findings with definite recommendations to a subsequent meeting of the conference. The chairman has appointed the following committee which is planning a meeting in the near future.

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COMMITTEE ON COOPERATION

Surgeon-General Rupert Blue, M.D., United States Public Health Service, Washington, D. C.

Dr. C. V. Chapin, Health Officer, City Hall, Providence, R. I.

Robert Lynn Cox, General Counsel, Association of Life Insurance Presidents, 1 Madison Avenue, New York City.

Dr. Livingston Farrand, Executive Secretary, National Association for Study and Prevention of Tuberculosis, 105 East Twenty-Second Street, New York City.

Prof. Irving Fisher, Yale University, New Haven, Conn. Committee of 100 on National Health.

John M. Glenn, General Director, Russell Sage Foundation, 105 East Twenty-Second Street, New York City.

Dr. Frederick R. Green, Secretary, Council on Health and Public Instruction, American Medical Association, 535 North Dearborn Street, Chicago.

Selskar M. Gunn, Managing Editor, American Journal of Public Health, 755 Boylston Street, Boston.

Frederick L. Hoffman, President, Prudential Life Insurance Company, Newark, N. J.

Dr. John H. Mason Knox, Jr., Executive Committee, National Association for the Study and Prevention of Infant Mortality, 804 Cathedral Street, Baltimore.

Wickcliffe Rose, Secretary, Rockefeller Sanitary Commission, Southern Building, Washington, D. C.

Prof. Henry R. Seager, American Association for Labor Legislation, 131 East Twenty-Third Street, New York City.

Thomas A. Storey, Secretary-General, International Congress on School Hygiene, College of the City of New York, New York City.

Lawrence Veiller, Director, Department for Improvement for Social Conditions of the New York Charity Organization Society, 105 East Twenty-Second Street, New York City.

Thomas D. Wood, Chairman, Committee on Social Hygiene, National Educational Association, Teachers' College, Columbia University, New York City.

The importance of this conference and the value of the work of the Council in taking the initiative in bringing this about was generally recognized by those present. It is hoped that this movement may result in better coordination of the organized efforts for the conservation of life and health.

MEDICOLEGAL BUREAU

The fourth recommendation of the Secretary at the October meeting was the establishment of a medicolegal bureau, in which could be collected, under a competent person, all material bearing on public health legislation and activities, and in which could be established model laws, compilations of authorities and references, suggestions, recommendations and criticisms for the benefit of the state legislative committees, in order that some definite and persistent policy might be worked out and followed by the Association and its constituent parts in building up a system of public health laws for the protection of the public. This plan meeting with the approval of the Council and the Board of Trustees, arrangements were made for securing the services of a competent person to take charge of such a bureau, with the result that on January 1, Mr. John Hubbard, a recent graduate of the Northwestern University Law School, became a part of the staff of the Council. The collection of laws on public health topics has been completed and we have now undertaken the preparation of a series of model laws. A mailing list of approximately 1,000 names has been prepared to which has been sent a return card asking for an expression of opinion as to the ten most important subjects for state legislation. This list includes 52 governors, 49 chief justices, 218 members of the American Bar Association, 304 physicians, 90 secretaries of state boards of health and examining boards, 125 representatives of women's clubs, 48 state superintendents of education, 30 executive officers of national organizations and 256 presidents of colleges and universities. To this list will be submitted preliminary drafts of model laws for criticism, and the completed drafts of the laws for approval. The model law for the registration of vital statistics has been revised. A model law providing for the reporting of ophthalmia neonatorum has been prepared in conjunction with the Committee on the Prevention of Blindness and a model law for the organization of state boards of health is in process of preparation.

SPECIAL COMMITTEES

COMMITTEE ON RESUSCITATION FROM MINE GASES

In the report of the Council for 1912 the appointment of a commission on Electrical Shock was announced. This commission completed its work in the fall, preparing a chart and a book of directions for resuscitation from electrical shock, both of which were printed by the *Electrical World* of New York, and distributed free in large quantities to electric-light plants, power houses, factories and other places where electrical currents are in constant use. As a result of the work of this commission, the Council was asked by the director of the Bureau of Mines of the United States Department of Labor to appoint a similar commission on resuscitation from mine gases. The following were appointed on such a commission:

Dr. W. B. Cannon, Chairman, Department of Physiology, Harvard Medical School, Boston.

Dr. S. J. Meltzer, Rockefeller Institute, New York City.

Dr. Yandell Henderson, Department of Physiology, Yale University, New Haven, Conn.

Dr. George W. Crile, Cleveland, Ohio.

Dr. Reid Hunt, Hygienic Laboratory, Washington, D. C.

Dr. Joseph Erlanger, St. Louis.

COMMITTEE ON RAILWAY SANITATION

At the meeting of the Council held October 19, 1912, the following Committee on Railway Sanitation was appointed:

Dr. H. M. Bracken, Chairman, Secretary State Board of Health, St. Paul, Minn.

Dr. A. M. Hume, Owosso, Mich.

Dr. J. N. Hurty, Secretary, State Board of Health, Indianapolis, Ind.

Dr. S. C. Plummer, Chief Surgeon, Rock Island Railway System, Chicago.

Prof. E. O. Jordan, University of Chicago, Chicago.

Dr. Thos. R. Crowder, Superintendent of Sanitation, Pullman Company, Chicago.

Mr. W. L. Park, First Vice-President, Illinois Central R. R., Chicago.

Mr. A. C. Ridgway, Second Vice-President, Rock Island Railroad, Chicago.

At the request of the Council, Surgeon-General Rupert Blue designated Dr. W. C. Rucker, Assistant Surgeon-General of the United States Public Health Service, as a member of the committee.

This committee reported at the Legislative Conference, and the report will appear in The Bulletin.

MEDICAL EXPERT TESTIMONY

During the interval between the Council meeting, the chairman, by the authority of the Council, appointed the following Committee on Medical Expert Testimony:

Dr. Harold N. Moyer, Chairman, Chicago.

Dr. Gilbert E. Seaman, Milwaukee, Wis.

Prof. E. R. Keedy, Northwestern University Law School, Chicago.

COMMITTEE ON REVISION OF THE MODEL VITAL STATISTICS LAW

With the authority of the Council the chairman appointed the following committee to revise the model vital statistics law:

Dr. J. N. McCormack, Chairman, Bowling Green, Ky.

Dr. Marshall L. Price, Baltimore, Md.

Dr. W. C. Woodward, Washington, D. C.

Dr. W. R. Batt, American Public Health Association, Harrisburg, Pa.

Mr. E. M. Abbott, American Bar Association.

Dr. Cressy L. Wilbur, Bureau of the Census, Washington, D. C.

The report of this committee will be found among the reports of subcommittees.

STATE LEGISLATION

During the fall and winter legislatures have met in forty-two states. The number of bills bearing on public health matters has probably been unprecedented. As nearly as can be estimated, between 700 and 800 bills on health or related subjects have been introduced in the different legislatures. At the time of writing this report the legislatures are still in session in Connecticut, Illinois, Massachusetts, Pennsylvania and Wisconsin. Complete reports have not yet been received from all of the others. Without attempting to present any definite synopsis of legislation as in previous years, it will only be said that the Council has endeavored to keep informed regarding the legislative situation in the different states and to cooperate, to the best of its ability, with the state committees and to furnish them all the information and assistance possible. The legislative work of the organization would be greatly facilitated if each state association would establish a standing committee on legislation or on legislation and public health, and would provide for one member in the capital city of the state, who could be furnished with the equipment necessary to keep him informed constantly regarding the legislative situation in his state. It is at present extremely difficult to learn in many cases what bills have been introduced, or even what laws have been enacted.

NATIONAL HEALTH LEGISLATION

A considerable portion of the time and efforts of the Council during the past year has been devoted to an effort to bring about harmonious cooperation between the Council itself, the special Committee on National Health Organization, established by the House of Delegates at the 1910 session at St. Louis, and the Committee of One Hundred, in order that a definite program might be adopted by which concerted action for national health legislation might be possible. Prof. Irving Fisher, Chairman of the Committee of One Hundred, arranged a conference of the executive committee of the Committee of One Hundred, and the special committee of the American Medical Association at Washington on December 9. On December 5, Dr. W. C. Woodward moved that a special meeting of the Council be called on December 9, to meet with the other two bodies. As the time was too short, the Council declined to meet at that time, but authorized the chairman to arrange for a conference at the earliest possible date. Accordingly, a special meeting of the Council was called at Philadelphia on January 4, to which were invited the members of the special committee, with the understanding that the expense of attending the meeting would be borne by the Council. This meeting was attended by four of the members of the Council and by Drs. S. G. Dixon, W. H. Welch, H. P. Walcott of the special committee. After spending the day in discussion and conference, the Council authorized the chairman to correspond with Professor Fisher and Dr. Murphy and to arrange for a joint conference in Washington of the three committees at the expense of the Council. After considerable correspondence a joint letter signed by Dr. Murphy and Dr. Favill, was sent to the members of the Council and of the special committee and to Professor Fisher, calling a joint meeting in Washington, D. C., on Monday, May 5, 1913. To this meeting were invited President Jacobi, President-Elect Witherspoon, General Manager and Editor Simmons, Secretary Craig of the American Medical Association, Surgeon-General Rupert Blue of the Public Health Service, Senators Owen and Ransdell, and Representative Foster. Two days' conference resulted in the appointment of a special committee to call on President Wilson and present the importance of a national Department of Health and of a White House conference on vital resources, and of a committee to confer with Senator Owen with a view to revising the present Senate Bill No. 1. The conference also endorsed the following program drafted by Prof. Irving Fisher and unanimously adopted after exhaustive discussion:

First: Appoint a committee to see President Wilson, to-morrow, May 6, at 10:45, and communicate to him the results of our conference and request him to decide upon an administration policy concerning public health legislation.

Second: Recommend to President Wilson that he definitely advocate the establishment of a Department of Health.

Third: That he cooperate with Representative Foster in attempting to secure a Committee on Public health in the House of Representatives during the present special session.

Fourth: That he call a White House conference on Public Health next fall somewhat similar to the Governors' Conference on Conservation called by President Roosevelt. The object of this conference is to promote the success of the President's policies and if necessary to aid in framing these policies.

Fifth: That at the next regular session the President should send a special message favoring public health legislation or else emphasize it in his regular annual message.

Sixth: That the President should select for the first assistant Secretary of the Treasury someone interested in public health.

Seventh: That in the next regular session we should support the President in securing such public health legislation as he decides to recommend.

The present situation is most gratifying, in that all the officers and committees representing the association have agreed on a definite program of procedure and have also made provision for the revision of the present Senate Bill No. 1.

The second portion of the report of the Council which consists of the reports of its various subcommittees is deserving of careful consideration. The Council wishes to express its indebtedness to the members of the various committees which have worked earnestly and faithfully during the past year.

Respectfully submitted. HENRY B. FAVILL, Chairman.
W. C. WOODWARD,
J. N. MCCORMACK,
W. B. CANNON,
H. M. BRACKEN,
FREDERICK R. GREEN, Secretary.

REPORTS OF SUBCOMMITTEES OF THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

REPORT OF THE COMMITTEE ON PREVENTION OF BLINDNESS

To the Council on Health and Public Instruction:

Your committee begs leave to report that under its direction there has been prepared, during the past year, a sketch of a lecture on ophthalmia neonatorum, together with a grouping of established data that can be used as reference material. This is illustrated by a series of 162 lantern slides covering ophthalmia neonatorum and another series covering the entire subject, as far as developed, of the prevention of blindness. A number of sets of these will be prepared by the Council on Health and Public Instruction to be loaned for public lectures before Medical Societies, popular audiences or wherever they can accomplish the largest educative results. (Appendix A.*)

Your committee, after advising with ophthalmologists, obstetricians and others, has also prepared, as directed, a tentative model law for the control of ophthalmia neonatorum. This tentative law has been revised by the attorney of the Association in order that the phraseology may be such as would meet the requirements of the law. It will be submitted to the Section on Ophthalmology and to the Association for further action at this meeting, when, with such modifications as may be suggested, if approved, it will serve as a model wherever legislation on this subject may be enacted. It is of course impossible that any single law would meet the conditions and requirements of all states and it must therefore be submitted to local legal counsel before being enacted into a law of each state.

A summary of that law is also annexed herewith. (Appendix B.)

The necessity of a uniform law is evident from the fragmentary and imperfect legislation already existing in many other states.

The control of ophthalmia neonatorum is of course closely related to the question of midwives. The following summary of the existing condition in the various states, obtained through the courtesy of Miss Carolyn C. Van Blarcom, Secretary of the New York Association for the Blind, is of value. (Appendix C.) Prepared by Dr. J. Clifton Edgar.

ACCIDENTS

As an indication of the proportionate number of eye accidents the following record was obtained through the efforts of the Committee on the Prevention of Blindness of the New York Association for the Blind. (Appendix E.)

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* Omitted here, but included in the reprint of the minutes.

The importance of this work will be more fully appreciated when it is learned from a statement made by Mr. C. W. Price, assistant to the Wisconsin Industrial Commission, that the average number of eye injuries in the McCormick Works was about fifty a month and these were reduced immediately after the use of spectacles to four in a month, and of these only one of the four caused any loss of time. It was also learned that the American Steel Foundries by using adequate protection for the eyes of its employees have reduced eye injuries about 85 per cent. The necessity is therefore very evident of some method by which an exact record can be maintained and references of all eye injuries be reported to public institutions. This can be readily done by means of a blank, and it might be used by physicians. (Appendix F.) If such records were filed at some central point so that they might be readily accessible they would be not only of great statistical value but they would so demonstrate the need of protective measures, where they were employed, that their use must of necessity become universal.

TRACHOMA

Concerning trachoma, Dr. John Green, Jr., sent a brief but important report. (Appendix G.) The Federal Government is prepared to cooperate with all other medical or philanthropic bodies in controlling what has already grown to be a menace to sight in many parts of the United States.

COOPERATION WITH NEW YORK COMMITTEE

The Committee for the Prevention of Blindness of the New York Association for the Blind has worked in cooperation with the Committee on the Prevention of Blindness of the American Medical Association and a brief report will indicate the amount of work which has already been accomplished in states outside of New York. It is an index of the development and growth of the entire movement. (Appendix D.)

WOOD ALCOHOL

The importance of protecting the public from the dangers of wood alcohol has been emphasized through the pages of The Journal of the American Medical Association by a special article on the subject by Dr. Casey A. Wood which has been further emphasized by editorial comment. The Committee on the Prevention of Blindness of the New York Association for the Blind and the State Factory Employers' Commission have together formulated a bill which has been introduced into the legislature of New York and it is expected will be passed. (Appendix H.)

The resolutions adopted by that Committee are also important and valuable. (Appendix I.)

TOXIC AMBLYOPIAS

Concerning toxic amblyopias it has been suggested by Dr. G. E. de Schweinitz that it would be well if attention were called to the blindness of arsenic compounds. The increasing use of these preparations makes it a timely one, and it is hoped that during the coming year a report may be obtained upon this subject.

The necessity of a more completely organized movement for the prevention of blindness has been suggested by the Chairman of the Executive Committee of the Section on Ophthalmology, who submits a very complete plan which forms part of this report. (Appendix J.)

Preventive work has grown with such rapidity and its necessity has became so evident that a further organization of the movement is greatly to be desired and a more complete system of cooperation with all existing bodies having like aims.

Respectfully submitted,

F. Park Lewis, *Chairman*,
J. Clifton Edgar,
F. F. Wesbrook,
George E. de Schweinitz,
Thomas S. Holloway,
Casey A. Wood,
John Green, Jr.,
Clarence Loeb,
Wm. Campbell Posey,
Mark D. Stevenson.

APPENDIX B.—A BILL FOR AN ACT ENTITLED AN ACT FOR THE PREVENTION OF BLINDNESS FROM OPHTHALMIA NEONATORUM; DEFINING OPHTHALMIA NEONATORUM; DESIGNATING CERTAIN POWERS AND DUTIES AND OTHERWISE PROVIDING FOR THE ENFORCEMENT OF THIS ACT

Section 1.—Ophthalmia neonatorum defined. Any condition of the eye, or eyes, of any infant shall, independent of the nature of the infection, be known as ophthalmia neonatorum, in which there is any inflammation, swelling or redness in either one or both eyes of any such infant, either apart from or together with, any unnatural discharge from the eye, or eyes, of any such infant at any time within two weeks after the birth of such infant.

Sec. 2.—Duties of physicians, midwives, etc.—It shall be the duty of any physician, surgeon, obstetrician, midwife, nurse, maternity home or hospital of any nature, parent, relative, and any person or persons attendant upon, or assisting in any way whatsoever, any woman at childbirth, or attendant upon, or assisting in any way whatsoever any infant, or the mother of any infant, at any time within two weeks after childbirth, knowing the condition hereinabove defined, to exist, and within six hours thereafter, to report such fact, as the State Board of Health shall direct, to the local health officer of the city, town, village, or whatever other political division there may be, within which the mother of any such infant may reside.

Sec. 3.—Duties of the local health officer.—

It shall be the duty of the local health officer,

1. To investigate each case as filed with him in pursuance with this law, and any other such case as may come to his attention.
2. To report all cases of ophthalmia neonatorum and the result of all such investigations as he shall make, as the State Board of Health shall direct.
3. To conform to such other rules and regulations as the State Board of Health shall promulgate for his further guidance.

Sec. 4.—Duties of the State Board of Health.—

It shall be the duty of the State Board of Health

1. To enforce the provisions of this act.
2. To promulgate such rules and regulations as shall, under this act, be necessary for the purpose of this act, and such as the State Board of Health may deem necessary for the further and proper guidance of local health officers, etc.
3. To provide for the gratuitous distribution of a scientific prophylactic for ophthalmia neonatorum, together with proper directions for the use and administration thereof, to all physicians, midwives and the like, as may be engaged in the practice of obstetrics or assisting at childbirth.
4. To print and publish such further advice and information concerning the dangers of ophthalmia neonatorum and the necessity for prompt and effective treatment thereof, as may be deemed fit.
5. To furnish copies of this law to all physicians, midwives and the like, as may be engaged in the practice of obstetrics or assisting at childbirth.
6. To keep a proper record of any and all cases of ophthalmia neonatorum as shall be filed in their office in pursuance with this law, and as may come to their attention in any way, and to constitute such records a part of the annual report to the governor and the legislature.
7. To report any and all violations of this act as may come to their attention to the prosecuting attorney of the district wherein said misdemeanor may have been committed, and to assist said official in any way possible, such as by securing necessary evidence, etc.

Sec. 5.—Duties of maternity homes, physicians, etc.

It shall be the duty of all maternity homes and any and all hospitals, etc., to maintain such records of cases of ophthalmia neonatorum as the State Board of Health shall direct. It shall be the duty of any and all physicians, midwives and the like, in addition to reporting as hereinbefore enacted, to advise, prescribe and employ, in the treatment of all cases of ophthalmia neonatorum, such prophylactic as the State Board of Health shall direct.

Sec. 6.—Violation of act a misdemeanor; knowledge—

The failure of any and all physicians, midwives, etc., as hereinabove set forth, to report as herein prescribed, or the failure of any hospital to record, as hereinbefore enacted, or the failure of any physician, midwife and the like, to treat as the State Board of Health shall have directed, any and all cases of ophthalmia neonatorum, as herein prescribed, and, under such circumstances as are herewith set forth, or any or all of such violations, as the case may be, shall constitute a misdemeanor under this act. Any person accused of a misdemeanor under this act shall, upon conviction thereof, be fined, for the first offense, not to exceed $50.00; for a second offense, not to exceed $100.00, and for a third offense, and thereafter, not to exceed $200.00 for each violation; and, if the accused be a physician, midwife or the like, such person shall, in the discretion of the court, suffer a revocation of license or both fine and revocation, as the court may see fit; and if the accused be a maternity home or the like, duly incorporated under the laws of the state, the court may, in its discretion, order a revocation of its charter; and any collusion between any official and any person, or between any others herein named, to misstate or conceal any facts which, under this act, are essential to report correctly, shall likewise constitute a misdemeanor, and the accused shall, upon a conviction, suffer a penalty such as is hereinabove enacted. The act of the agent in the scope of his employment shall be deemed the act of the principal. Any and all cases of ophthalmia neonatorum, or the resultant blindness therefrom, on which the accused may have been in attendance, as hereinbefore set forth, shall be taken as prima facie evidence of knowledge on the part of the accused. It shall be the duty of the state's attorney, for the proper district, to prosecute for all misdemeanors as herein prescribed.

Sec. 7.—Appropriation.

The sum of $.......... shall be annually appropriated for the use of the State Board of Health in enforcing and carrying out the provisions of this act. Any and all necessary and legitimate expenses that may be incurred in prosecuting a case under this act, shall, upon a proper showing, be met by the State Board of Health cut of this appropriation. In addition thereto, all fines and penalties recovered hereunder, shall be paid into the state treasury and shall constitute a special fund for the uses and purposes of the State Board of Health as herein enacted.

Sec. 8.—Emergency.

An emergency existing, this act shall take effect upon its passage, as by law prescribed.

Sec. 9.—Repealing.

All acts and parts of acts in conflict herewith are hereby repealed.

APPENDIX C.

Information relating to work for prevention of blindness from ophthalmia neonatorum since June 1, 1912:

Midwives are allowed by law to practice unrestricted in the twelve states of Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Kentucky, Maine, South Carolina, Tennessee, Virginia and West Virginia.

There are no laws relating in any way to the training, registration or practice of midwives in the fifteen states of California, Delaware, Massachusetts, Michigan, Mississippi, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Oklahoma, Oregon, Rhode Island, South Dakota and Vermont.

In the twenty-two states where there are laws relating to midwives, fifteen require that they shall be licensed and that they shall pass an examination before being licensed to practice, while nine restrict the practice of midwives to attendance on normal cases. In no state is there provision for supervision of midwives in their practice, and although this is carried on by two or three local boards of health, it is evidently not wholly satisfactory.

In six states it is required that midwives shall be trained, this training in two states amounting to attendance at five cases of birth, and in the other four training in a recognized school. But in no one of the latter states do there exist any such standardized schools. So far as we are able to learn, the only real training schools for midwives in this country are the one connected with Bellevue Hospital, established in 1911 as a result of the efforts of the Committee on Prevention of Blindness, and the Philadelphia City Hospital, where women are received for midwifery training on the recommendation of the Board of Medical Examiners. (This material has just been tabulated and is up to date.)

According to figures very recently received from state and city health officials throughout the country, approximately 34 per cent. of all births are reported by midwives. This figure, although made up from the official reports, is only approximate, for many of the replies received from both state and city health officers stated frankly that they had no idea of the proportion of births attended by midwives. Although some of them believed it to be very large, they could give no figure. Others volunteered the information that midwives generally reported births much more satisfactorily than physicians.

Figures collected by the committee from schools for the blind throughout the country show that in 1912, out of a total of 2,327 pupils in twenty-one schools, 684, or 29.2 per cent., of the pupils were needlessly blind from ophthalmia neonatorum; eighty-eight of the 386 children admitted for the first time during the present school year are blind from ophthalmia neonatorum, thus showing that the percentage of needless blindness from this cause in schools for the blind continues about the same this year as for preceding years:

1912—88 out of 386 new admissions = 22.7% blind from O. N.
1911—88 out of 415 new admissions = 21.2% blind from O. N.
1910—84 out of 351 new admissions = 23.9% blind from O. N.

In this connection it should be noted that the figures showing the annual admissions of cases of ophthalmia neonatorum to schools for the blind are of little value as indicating the results of work which is being done for the suppression of ophthalmia neonatorum. Children are not usually admitted to schools for the blind until they are 7 or 8 years of age, whereas active work for the prevention of blindness has only been carried on during the past four or five years. While we could scarcely look for results in the admissions to these schools before 1916, it is believed that owing to the educational work which is being done by this committee and other organizations, ophthalmia neonatorum is already diminishing throughout the country.

Of 108 cases of ophthalmia neonatorum reported to this committee by doctors in the various eye clinics in New York City, it was found on investigation that sixty-two were attended by physicians, forty-three by midwives and three were emergency cases attended by neighbors. In fourteen of the sixty-two cases attended by physicians a prophylactic against ophthalmia neonatorum was used at birth and by eleven of the forty-three midwives. Out of eleven cases in which injury resulted, six lost one eye, two eyes were scarred, while three infants became totally blind. The cases of total blindness all occurred in the practice of physicians, while of the remaining eight, six were physicians' cases and two midwives'. In two cases where physicians undertook to treat the patients in their homes, the only care given being left to the mother, one eye was lost in one case and both eyes in the other.

Wisconsin in this year's meeting of the legislature is working for an appropriation of $3,000 for the free distribution of O. N. prophylactic outfits. This will make the seventh state which is carrying on such work.

Model bill for prevention of blindness from ophthalmia neonatorum, prepared by American Medical Association Committee on Prevention of Blindness.

Institutions and organizations interested for the first time in obtaining legislation relating to prevention of blindness from ophthalmia neonatorum. This interest was awakened by correspondence with this committee:

State University of Iowa, Iowa City.

State School for the Deaf and the Blind, Gooding, Idaho.
School for the Blind, Kansas City, Kan.
School for the Blind, Fort Gibson, Okla.
Oregon Library Commission, Salem, Ore.

It is much to be regretted that the reporting law in operation in Boston and some other cities is not enforced in New York City, where in 1912 only 173 cases of "babies' sore eyes" were reported to the City Department of Health.

APPENDIX D.

Report of work done by New York committee.

Appended are the names of the states and the kind of information asked for. The summary shows that the total number of applications from states outside of New York was sixty-six, these coming from twenty-seven different states and from Canada, South America and Australia.

These figures cannot be taken as an index of the amount of time expended by this committee for the promotion of preventive work outside of New York State. For example, it is sometimes necessary to entirely suspend the regular work of the committee for an entire day or for several days to collect material from the committee's files to be used in responding to a single request.

The information sought by workers in other states is mainly for statistics; suggestions in regard to legislation; for information to be used in preparing magazine articles or addresses; assistance in regard to exhibits and lantern-slides; and suggestions and information in connection with all the various subjects bearing on preventive work, either educational or to give practical effect to desired reforms.

In addition to the correspondence involved, there are also many visits received at the office from persons seeking information in behalf of prevention of blindness work in their respective states, or those desiring to inspect for selection the large number of photographs and lantern-slides which have been collected by this committee. You will readily understand that such visits consume much time which would otherwise be devoted to New York State work, for some member of the office staff must be placed at the disposal of the visitor during his or her stay in order that the greatest possible assistance be given.

Much of this interest has been evoked by the publications and statistical reports of this committee, which have been asked for and have been sent during the past five years into every state in the Union.

Because of our sincere desire to forward any work which tends to save from unnecessary blindness any human being, whether in this or some other state, we always comply with such requests as I have mentioned with the greatest care and willingness. We find, however, that our own work in this state, for which the committee was organized, is greatly retarded by so doing, because of the fact that our office staff is insufficient to do both state and national work satisfactorily. We are obliged again and again to postpone our own investigations, and the preparation of our own publications, etc., to meet these urgent demands. At the same time we are conscious that we are not doing the national work effectively. Time and again it would have been desirable to send some one to a near or a distant state to help the workers there, but this, of course, has been impossible. For those cases where legislative help has been asked for this would have been especially desirable.

In conclusion, I would respectfully ask that some relief be afforded this committee in connection with the work it is now doing for prevention of blindness outside of New York State.

REQUESTS FOR ASSISTANCE OR INFORMATION FROM STATES OUTSIDE OF NEW YORK AND FOREIGN COUNTRIES TO COMMITTEE ON PREVENTION OF BLINDNESS, DURING THE THREE YEARS ENDING APRIL 28, 1913

Alabama, California, District of Columbia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, New Jersey, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Wisconsin, Australia, Canada, South America.

APPENDIX E.

The records of patients suffering from eye accidents were copied from the admission books of the Manhattan Eye, Ear and Throat Hospital and the New York Ophthalmic and Aural Institute, covering the period from January, 1910, through February, 1911. From the former seventy-six records were taken and from the latter 359. The following statistics from the last reports of these institutions and from two other reports will give some idea of the extent of eye accidents:

Hospital	Total number of new patients in Eye Department, excepting refractive cases.	Eye Accident cases.	Per-cent.
Manhattan Eye, Ear and Throat Hospital, Oct. 1, 1908, to Oct. 1, 1909	15,002	2,704	17
New York Ophthalmic and Aural Institute Oct. 1, 1909, to Oct. 1, 1910	6,026	446	7
New York Eye and Ear Infirmary Sept. 30, 1909, to Sept. 30, 1910	15,844	2,633	16
Harlem Eye, Ear and Throat Hospital Oct. 1, 1909, to Oct. 1, 1910	3,505	577	16

In addition to these records, at your request, I copied the causes of blindness in 1,000 cases from the census of the New York Association for the Blind. The result was as follows:

Cause	Number of cases	Per cent.
Congenital	52	5.2
Accidents	159	15.9
Diseases	789	78.9
	1000	100.0

APPENDIX F.

Record of cases with special notes on accidents and injuries, trachoma, ophthalmia neonatorum and the causes of blindness, together with the usual data.

Case No. Place of Examination. Date. Name or initials of patient
Sex. Age. Residence of patient. Diagnosis. R.V. L.V.

ACCIDENT OR INJURY

Has report of this case been made elsewhere? Where?
Previous treatment? How did accident occur?
Could it have been avoided? How?
Present condition. Prognosis.

TRACHOMA

Present condition. How long present?
Where probably originated? Others in family infected?
Cornea involved. Prognosis as to time and vision.

OPHTHALMIA NEONATORUM

How soon after birth infection appeared?
Mother attended by doctor or midwife?
Name of attendant. What, if any, prophylactic was used?
Clear cornea? Corneal ulcer? Scar?
Condition of eyes when first seen. $\left.\right\}\begin{array}{l}\text{R.}\\\text{L.}\end{array}$
Condition of eyes when discharged. $\begin{array}{l}\text{R.}\\\text{L.}\end{array}$
Duration of treatment. Micro-organism determined?
Prognosis.

BLINDNESS

Absolute.—No light perception.
Practical.—Cannot count fingers further than 1 meter.
Relative.—Vision greater than 1 meter but because of narrow field or other reasons cannot guide oneself.
Cause of blindness. Present condition.
Could blindness have been prevented? How?

CONDITIONS OF ILLUMINATION

Daylight.—Number and amount of window space in relation to patient. Position.

Gas Flame.—Number and amount of window space in relation to patient. Position.

Electricity.—Candle power and current cycles and position in relation to patient.

Mercury vapor light.—Candle power and position in relation to patient.

OPERATIONS

Cataract	R.		Result R.
	L.		Result L.
Glaucoma	R.	T.	Result R.
	L.	T.	Result L.
Strabismus	R.	Degree	Result R.
	L.	Degree	Result L.
Other operations	R.		Result R.
	L.		Result L.

Remarks

Signed

————————M.D.

————————Street,

————————State.

APPENDIX G

PREVALENCE OF TRACHOMA IN THE UNITED STATES

It is impossible at the present time to arrive at a complete knowledge of the prevalence of trachoma in the United States, for the reason that as yet no general survey of the incidence of this disease has been undertaken in this country. Even if such general investigation were to be undertaken, it is extremely unlikely that it would yield accurate results. And the prime obstacle in the path of the investigation would be the fact that, with rare exceptions, boards of health, whether town, city or state, have failed to appreciate that trachoma is a dangerous contagious disease, and hence have not included it in the list of reportable maladies.

It is the opinion of J. W. Schereschewsky[1] that "in the United States trachoma has not as yet become general in its distribution. Owing to the great tide of immigration to this country, we find it rather frequent along the Atlantic Seaboard. Owing to the westward migratory movements, we also find trachoma prevalent to a certain degree among the inhabitants of the West. It has also been endemic for a number of years in certain restricted areas of Southern Illinois and in the mountains of Kentucky and West Virginia."

S. H. Brown[2] states that in New York City, prior to 1897, trachoma constituted 4 per cent. in over half a million subjects with contagious diseases; three years later (trachoma having in the meantime been classified as a "dangerous contagious" disease by the immigration authorities, thus compelling the deportation of aliens so afflicted) only a little over 2 per cent. were seen in 100,000 cases of contagious diseases. Although New York City probably has the greatest number of cases of any one focus, the disease is on the decline when the increase in population is taken into account. The New York Municipal Bureau of Health recorded something like 10,435 cases of trachoma in 1908, while in 1909 the number reported was 7,090. Additional evidence of the decline of trachoma in New York City is found from the results of school inspection; in 1902 20 per cent. of schoolchildren had trachoma; in 1908 70 per cent., and in 1910 only 3 per cent. were so affected.

Information from Baltimore, Cleveland and Philadelphia indicates that the disease in these cities is on the decline. In Toledo and Akron, Ohio, it is on the increase. In Dayton, Ohio, it is said to be assuming alarming proportions. In Chicago the disease is stationary.

It should be noted that the increase is especially noticeable in smaller towns and cities which do not seem to be able to put in force the procedures that would insure prompt eradication. Figures from the Wills Eye Hospital clearly indicate the decrease of the disease. In 1872 the percentage was 5.9; in 1908, 0.7 per cent. Not only has the incidence of the disease diminished, but it has, to a great extent, lost its virulence.

The disease is very prevalent in Southern Illinois and to some extent throughout the rest of the state.[3]

Northern Arkansas is seriously infected. The following excerpt from the Twenty-First Biennial Report of the Arkansas School for the Blind indicates how serious is the menace to sight from trachoma in the state:

"The condition in Arkansas shows a larger proportion of pupils in school with trachoma than from all other causes, and a larger percentage than is shown to exist in other states. The northeastern and northwestern portions of the state constitute the principal areas of infection. The eastern and southern portions are almost entirely free as far as shown by our records. In the Arkansas school the number of pupils enrolled in 1908-10 was 199 white and twenty-eight colored. The number of cases of trachoma and blindness caused from trachoma was 115."

The Committee on Trachoma Investigation of the Missouri State Medical Association (1912) concludes that there are not less than 10,000 sufferers from trachoma in Missouri.[4]

Dr. J. A. Stucky of Lexington, Ky., who recently made a journey into the heart of the mountain regions of Eastern Kentucky, makes the following report:

"I found that in families where there were children it was an exception to find only one case of diseased eyes. In one instance, seven out of the nine children were unable to attend school on account of trachoma. Such cases as these are not allowed to attend our schools, and yet in the mountains they are not considered infectious or dangerous, but just 'sore eyes.' A solution to the problem in the mountains is the same as in the state—the question of education. Many of those who need surgical treatment and hospital care have not the financial means to obtain these. The county in which they live contains no institution where they can be cared for without personal expense, and the county treasury contains no funds to provide for even hospital care elsewhere."

Conditions in these mountain regions prompted the United States Public Health Service to send a special investigator (McMullen) in the summer of 1912 to endeavor to secure exact data. His survey, which included seven counties in the mountain regions of Eastern Kentucky, revealed an appalling prevalence of the disease. Of 3,974 individuals selected at random, 500, or 12.5 per cent., were affected; 338 out of 2,796 schoolchildren examined had trachoma (12 per cent.). In Knott, Perry, Leslie and Breathitt counties, out of a total population of 50,000, McMullen estimated that there were 3,400 victims of trachoma. These people are very poor, live crowded in wretched hovels without proper light or ventilation, and have no conception of ordinary rules of sanitation conditions which conspire to disseminate the disease.

White and Treibley[5] estimate that, in Oklahoma, out of a total Indian population of 100,000, about 65,000 are sufferers from trachoma. These authors state that the disease is "very prevalent in Illinois, Missouri, Oklahoma, Arkansas and Texas." Dr. White found that 48 per cent. of the white children in the Pawnee public schools were affected, and his examination in other white schools throughout the state justifies the assertion that from 20 per cent. to 40 per cent. of all the white schoolchildren of Oklahoma are trachomatous.

The following remedial measures are suggested:

1. Trachoma should be made a reportable disease to every local board of health.

2. Local boards of health and health commissioners should regard trachoma with the same concern that they regard scarlet fever, diphtheria and typhoid fever. Trachoma may not be dangerous to life, but it is dangerous to that which is almost as precious as life itself—eyesight. The failure to recognize trachoma as a serious contagious disease is reprehensible.

3. State boards of health should require a tabulation of all fresh cases of trachoma.

4. The federal government should provide measures for the investigation of trachoma throughout the United States, and where it is found to exist measures should be taken in conjunction with the local authorities for its control.

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[1] Schereschewsky, J. W.: Trachoma, Clark and Schereschewsky, Pub. Health, Serv., 1907.

[2] Brown, S. H.: Trachoma, New York Med. Jour., April 1, 1911, p. 608.

[3] Wilder: Ophthal. Rec., November, 1901.

[4] Jour. Missouri Med. Assn., July, 1912.

[5] White and Treibley: Ophthal. Rec., May 1, 1912.

5. Boards of education must be roused to a more intelligent attitude toward this disease. The opposition to medical inspection in the public schools must be abandoned if the eyes and eyesight of the coming generation are to be safeguarded.

6. Education of the people in the true meaning and possible danger of this disease by talks with the family physician, public lectures by oculists, the distribution of pamphlets and books issued by local public libraries should be insisted on.

7. Special stress should be laid on the danger of contagion and the familiar character of the disease. Epidemics in institutions should be guarded against by periodic ocular inspection of all the inmates.

8. In localities where trachoma is endemic, the hospitals should supply a few beds in a small ward for trachoma patients who require intensive treatment or operation.

9. Practitioners in the country should equip themselves to recognize incipient trachoma and to apply the simpler medical and surgical measures for its relief. Whenever possible, the patient, even in the incipient stage, should be referred to an oculist.

10. Trachoma with complications, e. g., pannus, ulcer, entropion, iritis, etc., should be treated by an oculist.

APPENDIX H. AN ACT TO AMEND THE PUBLIC HEALTH LAW IN RELATION TO THE SALE OF WOOD ALCOHOL

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1, Chapter 49, of the laws of 1909, entitled, "An act in relation to the public health, constituting Chapter 45 of the Consolidated Laws, is hereby amended by inserting therein, after Section 318B, to read as follows:

"Sale of wood alcohol. No person shall sell any wood alcohol, nor any fluid containing wood alcohol, unless bottle, vessel or other container in which the same is sold or transported shall bear a label containing the following words conspicuously printed in red ink:

"*POISON*
"*WOOD ALCOHOL*

"Do not use except where there is sufficient ventilation.

"Sec. 2. This act shall take effect Oct. 1, 1913."

APPENDIX I. RESOLUTIONS ADOPTED

WHEREAS, There occur annually a number of cases of death and blindness in the State of New York as the result of drinking and inhaling the fumes of wood alcohol; and

WHEREAS, Although wood alcohol is required by the New York state pharmacy law to be labeled poison, in its refined form and under the name of Columbian spirits, it is generally sold by druggists without such label, and wood alcohol is sold by painters and grocers in containers bearing either no label at all or a misleading label; and

WHEREAS, No measures have been taken to require adequate ventilation for the protection of the workmen against the danger of inhaling the fumes of wood alcohol; therefore, be it

Resolved, That this committee endeavor to secure measures which shall provide that every container of wood alcohol, under any name, shall be labeled poison, and that adequate ventilation shall be required in all industries in which the fumes of wood alcohol constitute a menace to the sight and life of workmen; and be it also

Resolved, That educational work be undertaken among tradesmen and public generally; and that cooperation be sought with other organizations having the same purpose in view, to the end that definite measures of reform may be secured to correct the evils connected with the manufacture, sale and use of wood alcohol.

APPENDIX J. PLAN FOR THE FORMATION OF STATE SOCIETIES FOR THE CONSERVATION OF VISION

(Submitted by Dr. William C. Posey.)

The scheme comprises the formation of *state societies*.

An Ophthalmological Section in connection with the State Medical Society in every state of the Union.

The appointment by the president of each state society of ten ophthalmologists from the society, who shall constitute a *State Commission for the Conservation of Vision.*

These ten ophthalmologists shall add to their number *ten lay members*, who shall be chosen with a view to the representation of interests allied to the work of conserving vision, i. e., state and municipal institutions for the blind, manufacturing concerns, architects, educators, philanthropists, artificial lighting corporations, etc.

When feasible, this commission shall make the chief officer of the health department of the state its honorary chairman, thereby working in touch and in harmony with that department of the commonwealth.

This commission shall have oversight over all matters pertaining to vision in each state; shall suggest laws for the prevention and treatment of all forms of ocular diseases; shall inquire into the proper lighting of public buildings, etc.; into the character of the printing, etc., of all text-books used in public schools; shall suggest proper standards for the examination of the eyes of all public servants in whom sharp vision is a requisite; in fine, shall actively engage in all phases of the vast problem of the conservation of vision in its broadest sense.

To give publicity to its work and to gain the cooperation and support of all the ophthalmologists within the state, it shall create a State Society for the Conservation of Vision, with annual dues of $1, payable to a member of the commission, its treasurer, chosen by the commission from their number. Other financial support shall be received from the state, from the state medical society and from private contribution. The membership of this society shall be unlimited, and it shall be the aim of the commission to extend its numbers as far as possible among the laity.

The proceedings of the commission and its aims should be given publicity in the state medical journal, while the State Department of Health should issue whatever bulletins may be necessary to call attention of the profession at large and of the public to the work in hand. Supplemental tracts, brochures, etc., should be issued from time to time at the expense of the society.

The commission shall provide for the proper presentation of the work by lectures and demonstrations, both before medical societies, other scientific bodies and the public at large, and shall endeavor to demonstrate by suitable illustrations and charts the dangers of various ocular diseases and the best means to prevent them.

The National Governing Body

In order that the work in the various states may be brought into some kind of relationship and to secure some form of cooperation between the various societies, some kind of a general governing board seems desirable, and as the commissions in the various states are part of their respective state societies, it is suggested that this board should be appointed by and be an integral part of the Ophthalmic Section of the American Medical Association, the representative and national body of eye surgeons.

It is suggested, therefore, that this governing body shall consist primarily of ten ophthalmic surgeons, who shall be appointed annually by the executive committee of the Section on Ophthalmology. In addition to these ten members appointed at large, the national governing board shall comprise the chairmen and secretaries of all the state commissions, and these ophthalmic members shall have the power to add to their number as many laymen as may seem desirable, their lay members consisting of representatives from scientific societies with allied interests, such, for example, as the National Illuminating Society; from philanthopic bodies, such as the Sage Foundation, and of individuals throughout the country who are particularly interested in the conservation of vision movement.

This national governing board shall direct in a general way the work of the various states and shall cooperate with the national government in all visual activities, as, for example, with the Public Health Service in its trachoma work, both at the portals of the country, as well as among the Indians and elsewhere; with the Department of Commerce and Labor, and for federal in fixing standards for the merchant marine and for federal pilots, and with the Interstate Commerce Commission in determining standpoint to govern the visual tests of railroad employees, etc. This body shall be provided with a paid secretary, and its bulletins shall be issued at the expense of the American Medical Association. Its presiding officer shall be chosen from the ten ophthalmologists appointed from the Section on Ophthalmology of the American Medical Association, at an election in which all the members of the board participate. It shall be the duty of the board to avoid duplication of effort in the various states, to collect statistics regarding the causes and prevention of blindness, etc.

Report of the Committee on Visual Standards for Pilots

To the Council on Health and Public Instruction:

The Committee on Visual Standard for Pilots has nothing to report for this year. We have made some effort to insist on proper visual standards for pilots in Pennsylvania, but owing to the political situation, have thought it unwise to proceed further in the matter. As stated in our last report, the visual standards for federal pilots are now fairly satisfactory.

William C. Posey, Chairman.

Report of Committee on Resuscitation from Electric Shock

To the Council on Health and Public Instruction:

The Commission on Resuscitation from Electric Shock has formulated a chart and booklet for the use of workers in power houses and on electric circuits, giving concise directions regarding the treatment of victims of electric shock, both as to methods of artificial respiration and as to care of burns.

The establishment of the Commission on Resuscitation from Electric Shock led to the request by Dr. J. A. Holmes, director of the Bureau of Mines, that the American Medical Association cooperate with that bureau in appointing a Committee on Resuscitation from Mine Gases. The members of the American Medical Association who were on the Commission for Electric Shock—Drs. S. J. Meltzer, G. W. Crile, Y. Henderson and W. B. Cannon—together with Drs. Reid Hunt and J. Erlanger, were appointed to the new committee. In cooperation with members of the Bureau of Mines, the committee has visited mines in the soft and hard coal districts of Pennsylvania, and observed the methods and devices used in mine accidents.

A subcommittee of both appointed bodies has been studying mechanical methods of maintaining respiration artificially, and is about ready to report its findings. The chairman of the subcommittee, Dr. S. J. Meltzer, has prepared a much simplified method of mechanical respiration, which will doubtless be of much service. The final reports of the two appointed bodies will probably be ready shortly.

W. B. Cannon, Chairman.

Report of the Committee for the Protection of Medical Research

To the Council on Health and Public Instruction:

During the past year a new pamphlet written by Dr. W. W. Keen and entitled "The Influence of Antivisection on Character," has been published. The chairman of the bureau has prepared a brief history of attempts, both in this country and abroad, to secure antivivisection legislation, and has described the methods which have been used here to avoid such restriction of animal experimentation as has hindered medical research in England. This paper, which was read at the February Conference, will be published in The Journal and reprinted as No. 25 of the series of pamphlets issued by the bureau. Two more pamphlets, one on the relation of animal experimentation to pharmacology, and the other on its relation to surgical operations, will probably complete the series.

The bureau has not been called on to take active part in stating the position of laboratory workers before legislative committees. There has been no general demand for legislation, and the attempts at securing legislation in New York and Pennsylvania seem to have been less effective than before. The public press appears to be readier than before to defend the experimental use of animals and to make known the results of medical research.

W. B. Cannon, Chairman.

Report of Committee on Cooperation with the National Education Association

To the Council on Health and Public Instruction:

Your committee, appointed by the Council on Health and Public Instruction, to confer with the committee selected by the National Education Association, to improve instruction in sanitation, hygiene, physiology and kindred sciences in the public schools, begs to submit the following report:

It was decided at the St. Louis meeting of the committees, in February, 1912, that a year be devoted to the study of the rural school: the building and its environment.

It was also agreed that an effort should be made to devote one evening to medical subjects at the Fiftieth Annual Convention of the National Education Association, to be held in Chicago, July 6-12, 1912.

On Thursday evening, July 11, 1912, the following speakers selected by your committee of the American Medical Association addressed the National Education Association at the Chicago Auditorium (President Jordan, presiding).

Topic: The Public Schools and the Public Health.

1. The Duty of the State in the Medical Inspection of Schools; Results which the Public May Rightfully Expect. Fletcher B. Dresslar, Specialist in School Hygiene, Bureau of Education, Washington, D. C.
2. The Teaching of Hygiene in the Schools: Public, Personal. David Starr Jordan, President of Leland Stanford, Jr., University, California.
3. Sanitation in the Rural Community. Chas. E. North, M.D., New York.
4. Medical Inspection and Medical Freedom. Charles A. L. Reed, M.D., Cincinnati, Ohio.

The Auditorium was packed; every chair was occupied and several hundred seats placed on the platform to accommodate the overflow. The addresses were appreciated, the speakers enthusiastically applauded, and the good accomplished cannot be over-estimated.

On the morning of July 12, in the rooms of President Jordan, Auditorium Hotel, a meeting of the committees convened.

Those present were: David Starr Jordan, P. P. Claxton, A. E. Winship, J. A. Shawan, Frederick R. Green, John M. Dodson and R. W. Corwin.

It was decided at this meeting that we continue the investigation and study of the rural school.

Commissioner Claxton offered the assistance of his office and the government in every way possible to further the interests of this important work.

On Dec. 14, 1912, your committee met in Chicago and discussed the work of the committees, showing satisfactory progress.

On Feb. 3, 1913, Chairman Wood of the Committee of the National Education Association, and Drs. Dodson, Green and Corwin of your committee had an all day's session at the University Club, Chicago, for the purpose of discussing a report to be submitted to the National Council of Education of the National Education Association at Philadelphia on Feb. 25, 1913.

It was decided at this meeting that Dr. John Dodson, and, if possible, Dr. M. J. Rosenau, with the Secretary Dr. Frederick R. Green, represent your committee at the Philadelphia meeting, and with the National Association committee submit a joint report to the National Council of Education of the National Education Association.

At the Philadelphia meeting it was voted by the committees to make an effort to have a medical and sanitary evening at the Fifty-First Annual Convention of the National Education Association to be held in Salt Lake, in July, 1913.

The Educational Council at St. Louis voted to recommend to the Fiftieth Annual Convention of the National Education Association that $1,600 be appropriated for this educational work.

In July, 1912, the American Medical Association voted to equal the sum appropriated by the National Education Association to the amount of $1,600 or less, for the purpose of studying the rural school and its environment.

Dr. Dresslar, who has devoted much time and attention to the subject of rural schools, and collected for the United States Government material for publication, has kindly offered to give the committees the benefit of his experience.

The committees now have workers in the field collecting data which will be of great value in making our final report.

Mr. Miller has been appointed working secretary and has spent a week carefully investigating a school district in Connecticut, and another week in Vermont, going around with a professor who is making a study of rural schools as a part of a careful educational survey of Vermont, authorized by a recent act of legislature. This provided an extraordinarily favorable opportunity for our working secretary to get some valuable material.

It is planned to have Mr. Miller go to districts in Northern New York and make a third study of rural schools there.

This added to material collected by Dr. Dresslar and by members of the committees, along with work planned, will make a valuable final report.

Your committee feels that the past year's work, although far from being complete, has made a most excellent beginning in the task undertaken, and when the report is issued it will be an excellentguide to students of school hygiene and sanitation, and of special interest to those interested in the welfare of schools and of practical worth to school children.

R. W. Corwin, Chairman.
John M. Dodson,
M. J. Rosenau.

Report of the Committee for Public Health Education Among Women

To the Council on Health and Public Instruction:

Since it is impossible in the space due this report to give details of work done in all places by all members of the Committee for Public Health Education Among Women a more comphehensive understanding of the present status can be gained by a review of the development of the educational idea through the past four years.

This committee was organized in accordance with the following resolution passed unanimously by the House of Delegates June 10, 1909:

Resolved, That the women physician members of the American Medical Association be and they are hereby requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations and other similar bodies, for the dissemination of accurate information touching these subjects among the people, and that they be requested to submit to the House of Delegates a yearly report of such work, and elect from among their number a committee to take charge of the same.

It was the belief of the committee that the problem of education is one, that both men and women were ready for education and that the work must be done by men and women. At the end of two years results had proved the truth of the first proposition: that both men and women were seeking information in regard to health.

The committee desired a form of organization which would continue to be of service under conditions of growth on the part of both the American Medical Association and the work which it had undertaken; an organization which would at the same time present to the public the medical profession working as a whole for the education of the people.

With this end in view, in June, 1911, Dr. Rosalie Slaughter Morton, at that time the chairman of the central committee, brought to the attention of the Council on Health and Public Instruction the importance of developing the committee work through state medical societies. The following resolutions were passed by the Council:

Whereas, The work of the Public Health Education Committee is of great service to the community in lessening disease and stands for the work in which the American Medical Association is interested; it is

Resolved, That this committee be made a standing committee of the Council on Health and Public Instruction to be known as the Committee for Public Health Education Among Women, and that either men or women may be members thereof, and that this committee shall have charge of the dissemination of information concerning the nature and prevention of diseases, among women's clubs, mothers' and teachers' organizations, church and settlement groups, Young Women's Christian Association, etc.

"The Council on Health and Public Instruction recommends that the state and county medical societies cooperate with the Committee for Public Health Education Among Women and make the state chairman of the committee a member of the State Public Health Committee and the county chairman a member of the County Public Health Committee in those counties or states which have standing committees on public health, and in those counties and states in which no such committees exist, the Council on Health and Public Instruction request that committees be formed especially to cooperate with the members of the Committee for Public Health Education Among Women. That this resolution be sent by Dr. Frederick R. Green, Secretary of the Council, to the secretary of each state medical society."

The committee has continuously worked toward this end seeking through its representatives in county and state the appointment of committees for public health education in those societies. Early in November, 1912, letters were sent by the central committee to the president and the secretary of each state medical society enclosing copies of these resolutions and asking their cooperation. Throughout the year in letters to many presidents and secretaries of state societies to members of the judicial council in each state as well as to workers under this committee, the plan of organization outlined has been urged as one which will enable the county society to coordinate the work of individuals, the state society to coordinate the work of counties and the central committee to coordinate the work of the states. Each committee will be able to stimulate interest when needed and to reach even the remotest corner of the state. The committee under the state society through its representative on the American Medical Association Committee will receive the benefit of the experience of similar committees in other states and through the same channel will share its own successes.

In response many states have replied that they would work with the state chairman under this committee and have done so cordially.

In its efforts toward organization this committee has never forgotten that it was organized "for the dissemination of accurate information in regard to the nature and prevention of disease." The small town and the rural district as well as the larger cities must be reached.

During the four years of the work of this committee growth from the centers of population toward the villages and farms has been encouraging.

In Minnesota this year through cooperation with the State Library Commission, Dr. L. Arlene Lane, state chairman, placed books on hygiene and sanitation within the reach of all by means of rest-rooms and a traveling library. The chairman for Beltrami County is planning a series of talks to reach each village in his county, the series to be given about midsummer. The chairman of Cottonwood County reports that in Windom, a town having a population of 1,750, a visiting nurse is employed by the churches and people whose duty it is to visit each house in which there is illness for the purpose of giving instruction in hygiene and sanitation.

In other states, also, village and traveling libraries have been used as a means of reaching the people. In one state abbreviated lists were sent to village libraries with suggestions for their use.

In Crawford County, Ohio, Dr. Katherine J. Rayl arranged a county health week which was carried out by the county committee of which she is a member. Speakers were secured from a distance and meetings were held on successive evenings in the largest three towns in the county. These towns have populations of 8,000, 7,000 and 3,000, respectively.

In Brooklyn, N. Y., Dr. Eliza Mosher has had a health play, which was written by a school teacher, presented to settlement house audiences of foreign-born people. Following the play the practical teachings are emphasized in a talk by one of the physicians.

In Connecticut last year talks were given in foreign languages. This year Michigan and Vermont are also reaching people who cannot understand English.

In Iowa this committee under the leadership of the chairman, Dr. Lenna L. Meanes, has perfected the organization of the baby health contest movement. In addition to the examination of children, attention of the parents is called to special points good or bad and personal as well as daily public instruction is given. The opportunity to examine hundreds of children fairly near the normal offers an enviable field for scientific investigation while at the same time interest is aroused in better care of the baby and in the betterment of the race. Following a series of similar contests in Oregon conducted on the Iowa plan a state eugenics society was formed.

As a result of the Iowa contests the central committee is receiving requests for information in regard to feeding and care of infants in a form which can be distributed to farmers' wives. It is the hope of the committee that this work will be guarded by physicians.

In recognition of the educational value of the baby health contest the Iowa State Legislature has appropriated $75,000 for a woman's building for the Iowa state fair, so that there may be a place for the work. Dr. Meanes is to plan that part of the building to be devoted to the babies.

During the past years there has been a growing tendency toward instruction with a definite end in view. This year an improved milk-supply has been secured in many places, and medical inspection of public schools and removal of the public drinking-cup. For details of a notable campaign the report of Dr. Julia G. McNutt for Albany County, N. Y., is interesting.

California, where the League for Medical Freedom formerly held sway, has been given over to constructive legislation for personal and community hygiene. Dr. Eleanor Seymour, state chairman, reached 10,000 women voters in her appeal for active interest in a bill requiring a health certificate before marriage framed by Dr. William F. Snow.

Dr. Charlotte J. Baker, chairman for San Diego County, gave her entire time during the winter in behalf of the more important bills affecting social conditions. Her success is marked by passage, among other bills, of the "Iowa Red Light and Abatement Act."

In Colorado and Nebraska members of this committee worked in support of legislation increasing the efficiency of the State Board of Health. Nebraska secured an appropriation for the establishment of a state board of health laboratory.

In Connecticut this was a year of legislation; many excellent bills were presented in which our chairman had an active interest. Among the number one requiring medical inspection in all schools in the state and nurses even in rural schools.

At the request of the Pennsylvania State Society the state chairman, Dr. Elizabeth Leiper Martin, prepared an open meeting for the women guests at the annual meeting of the state association. The meeting was of such value that she has been asked to prepare another for this year. Open meetings of county societies have been more frequent.

This year has seen a large increase in the number of talks in schools, high schools, normal schools and colleges.

As the work increases in magnitude and the workers in numbers there is increased difficulty in obtaining statistics and workers have less time in which to prepare reports. Last year twenty-five states which gave approximate audiences aggregated 119,637. This year twenty states which gave audiences aggregated 219,121. Both years over forty states reported lectures given so that such figures are manifestly far below the number of persons reached by this form of education.

Special mention is due the splendid work of the subcommittee on medical literature, under the able leadership of Dr. Jane L. Berry of New York City.

The list of books prepared last year was sent by the central committee to each library in the United States not technical and having 5,000 or more volumes, and to the library commissions in each state. At the request of the commissions in two states, and our state chairman in one, the list was sent to all smaller libraries also. Many letters have been received expressing appreciation of the value of this bibliography and stating that libraries are purchasing books endorsed by the committee.

Dr. Berry's committee has this year reviewed articles in current magazines; through some of its members it has reviewed books in foreign languages and has revised and enlarged the list of books published in English. Dr. Berry comments on improvement in the character of books on health subjects written for the laity.

The central committee has carried on the routine office work which included the distribution of 1,950 reports, 4,800 lists of books, 8,135 leaflets explaining to physicians the origin and object of the committee, 8,625 leaflets containing suggestions for health talks, 1,855 maps showing location of county chairmen, 5,903 letters and 2,260 pieces of miscellaneous mail, making a total of 33,528 pieces sent out during the year.

In addition to the routine of the office the central committee prepared an exhibit, showing the extent of the work for the International Congress on Hygiene and Demography in Washington. This exhibit was supervised by members of the committee in Washington and by one member of the central committee who went to Washington for that purpose. During the congress addresses were given by eleven women and seventeen men members of this committee on subjects of general educational interest.

By invitation from the New York State Medical Society a paper was presented by the chairman of the central committee at their annual meeting in April, on "Cooperation of State Medical Association in Public Health Education."

The development of work through the newspapers which was begun by this committee last year was abandoned at the request of the secretary of the Council. The press, however, has been used to advantage by many state chairmen under their own initiative.

In many communities there are organizations of small groups. Some of these are little interested in health subjects, some wish informal talks for their own members, some are too inexperienced to secure speakers for themselves. Many of these clubs do not know the resources of their own communities even. To meet this need this Committee last year planned to compile a list of those speakers both physicians and laymen who are in the employ of state boards of health, societies for the prevention of blindness, tuberculosis, and similar organizations and who are glad to respond to any invitation to speak.

This year at the request of the Chairman of the Public Health Department of the General Federation of Women's Clubs we consented to add a carefully selected list of names of those persons who were in the habit of speaking on health subjects, and had gained a reputation in their own states.

A list as complete as could be made by this committee in a first compilation was prepared and sent in, but was not printed.

The committee has in preparation a series of short papers for girls and women which will be written by Drs. Eliza Mosher, Kate Campbell Mead, Mary Sutton Macy and others. This series is designed to be both readable and accurate, and to give information which is beneficial without being sensational.

This committee has received many requests from both laymen and physicians for papers on various phases of hygiene and sanitation. There are many avenues through which these papers could be distributed widely to advantage. Many of them would be read before audiences of laymen where no physician is available for talks. They would also furnish suggestions to physicians who are willing to talk to their own people, but who are separated from libraries and other sources of information. We have manuscripts of many lectures given by speakers for this committee in New York, Washington and other cities.

We recommend that the Council on Health and Public Instruction print for the use of this committee those papers, not to exceed twenty in number, which the committee shall select as best suited to meet the general demand.

There are at present over one hundred men and two hundred women, officers and committee workers. Two hundred and seventy-five talks are reported as given to organizations of men exclusively. In two places total numbers of men have exceeded the number of women. In the minds of the public there is no reason why the medical profession should discriminate against men in the matter of education. Practically it has not been found possible to do so.

Since the name represents neither the personnel nor the work of the committee, we recommend also that the words "Among Women" be dropped, and that the name be The Committee for Public Health Education.

We regret the resignation of Dr. Rosalie Slaughter Morton, honorary chairman, whose untiring assistance has been invaluable to the work of the committee.

Those on whom this committee is dependent are so many that it is impossible to call them by name.

We wish to express our appreciation of hearty cooperation on the part of individuals and organizations among the laymen. We wish to thank the large number of physicians, both men and women, who have cordially assisted by giving freely of their time, enthusiasm and money: who by so doing have carried forward the education of the public and made possible this report.

Respectfully submitted,

Elenora S. Everhard, Chairman.
Gertrude Felker, Secretary.

REPORT OF THE COMMITTEE ON THE REVISION OF THE MODEL LAW ON VITAL STATISTICS

To the Council on Health and Public Instruction:

At the outset I must beg to disclaim the honor of being chairman of this committee. The chairman is Dr. J. N. McCormack of Kentucky, a gentleman well and favorably known to the members of the American Medical Association and whom some of the sanitary officials of Kentucky are wont to describe as "the best health officer in the world." Doctor McCormack authorized and directed me to conduct the work of the committee as acting chairman, and as such, therefore, I present this report.

The joint committee was composed of representatives of the American Medical Association (Drs. J. N. McCormack, Chairman, Marshall L. Price and William C. Woodward), American Public Health Association (Dr. Wilmer R. Batt), American Bar Association (Mr. Edwin M. Abbott of Philadelphia), and the Bureau of the Census (Dr. Cressy L. Wilbur). The Conference of Commissioners on Uniform State Laws was not formally represented in the membership of the committee, but its Special Committee on Vital and Penal Statistics, composed of Messrs. Frederick L. Siddons, Chairman, Aldis B. Browne and Walter C. Clephane, all of Washington, took an active interest in a consultative capacity and many valuable suggestions from it have been included in the revised bill. I append a circular relative to the model bill prepared by this committee. Miss Julia C. Lathrop, chief of the Children's Bureau, which is particularly interested in the effective registration of births, also attended the meeting of the committee, and valuable help was received from Mr. E. R. Magie, of the solicitor's office, for the Department of Commerce and Labor, of the Department of Justice. Thanks are due to many state and city registration officials who, in response to a circular letter stating the purpose of the committee and asking for suggestions, either sent valuable recommendations or appeared in person at the meeting of the committee held in Washington on Sept. 21, 1912. Acknowledgment should be made also to the American Public Health Association for including the meeting of this committee in its program. As the meeting came between the session of this association (Sept. 18-20) and the International Congress of Hygiene and Demography in the following week, many sanitary and registration officials were able to attend.

This meeting was a meeting of organization in which the suggestions presented by letter or *viva voce* were considered and a subcommittee of three, Mr. Abbott, chairman, Drs. Woodward and Wilbur, was appointed to make the draft of the revised model bill. The subcommittee held many meetings and labored faithfully to make the revised model bill as much better than the old one as possible. You have the result of their efforts, which has been approved by the full committee, as published by Dr. Green in the pamphlet entitled "Why Should Births and Deaths Be Registered?" and also in the first publication of the United States Children's Bureau. "Birth Registration—An Aid in Protecting the Lives and Rights of Children; Necessity for Extending the Registration Area."

The revised model bill does not differ materially in form, and not at all in principle, from the original. Either would furnish an adequate basis for drafting a bill for an individual state. It was hoped that the revised bill might be made shorter, but the consensus of opinion among registration officials, especially those of states in which the model laws are in practical operation, was that such a law should be very explicit and provide for all the necessary details of registration. For a state in which the length of the bill is objectionable and in which the state board of health may be authorized to make rules and regulations having the force of law, a short bill may be passed, providing for the establishment of a bureau of vital statistics and for the necessary compensation to local registrars, and the details of the model bill can then be adopted as such rules and regulations. This was done in Mississippi, and sections for this purpose are incorporated in the Arkansas bill now pending.

The circulation of this bill and the active interest taken in the extension of adequate registration methods by the council have been of great service in promoting the more efficient registration of vital statistics in the United States. Experience has proved that it may be relied upon to give good results, if proper provision be made for its support, and that the effectiveness of state laws now in existence may be measured by their degree of compliance with its principles. The bill has been introduced in the present sessions of the legislatures of Illinois, Iowa, North Carolina and Tennessee. Copies have been sent to all physicians in West Virginia, although it may not be feasible to pass such a law in that state until after the general reorganization of the Public Health Service. Indeed, this caution should be given, that while vital statistics are fundamental to public health work, their collection cannot be prosecuted successfully until the general sanitary administration of the state is provided for. A weak, half-starved state board of health will fail in the administration of any law, but once fairly equipped for work, a board can strengthen itself and promote the extension of its activities in all directions by no other means more effectively than by enforcing—and utilizing the results of—a good law for the registration of vital statistics.

Respectfully submitted,

Cressy L. Wilbur, M.D.
Acting Chairman.

At the request of the Chairman of the Council, Dr. Thomas McDavitt, Minnesota, Chairman of the Subcommittee on Uniform Regulation of Membership of the Council on Health and Public Instruction, presented the report of that subcommittee.

REPORT OF THE COMMITTEE ON UNIFORM REGULATION OF MEMBERSHIP

To the Council on Health and Public Instruction:

In the report of the committee made at the annual session for 1912 it was recommended that the entire question "of membership, its method of regulation, and its bearing on the work of the organization" should be referred to a meeting of the secretaries of the constituent state associations, to be called in Chicago some time in the fall of 1912, and that the recommendations contained in the report of the Committee for 1912 be presented to such a meeting for consideration. These recommendations having been endorsed by the House of Delegates and an appropriation for the expenses of a conference having been made by the Board of Trustees, the conference was called at the headquarters of the American Medical Association on Wednesday, Oct. 23, 1912. The conference was called to order by the Chairman of this Committee, who acted as Chairman of the conference. Thirty-eight constituent state associations were represented, thirty-five state secretaries being present and three states being represented by other officers or members of the state council, delegated to represent their associations. As a preliminary to discussion three papers were presented, one on "The History of Membership in the Americal Medical Association and the State Associations, by Dr. Frederick R. Green," one on "The Difficulties of the Present Situation," and one on "Remedies Proposed by the Committee," by Dr. Thos. McDavitt. Two days were spent in discussion of eight questions presented for consideration. These questions were as follows:

1. Fiscal Year. Should the fiscal year coincide with the calendar year? Should the fiscal year be the same in all county and state societies?

2. Should membership expire automatically at the end of the calendar year, and a new roster for each county and state society be made up with the beginning of each year?

3. When should membership reports from county secretaries to state secretaries be due?

4. Should the dues of new members, joining after the first of the year, be pro rated for the remainder of the year?

5. Should an admission fee be required in addition to the annual dues?

6. Should uniform application blanks, receipt blanks, membership and transfer cards be adopted?

7. Should constituent state associations hold charters from the American Medical Association?

8. Should a uniform plan for the transfer of members be adopted?

At the conclusion of the discussion a committee was appointed to formulate recommendations for the adoption of the conference. The Committee reported as follows:

The Committee on Recommendations herewith submits the following report:

1. We recommend that this conference endorse the plan of having the fiscal year coincide with the calendar year in all parts of the organization. We further recommend that secretaries of all state associations which have not already adopted this provision bring this matter to the attention of their associations and recommend its adoption.

2. We recommend that constituent state associations adopt provisions making dues in county societies payable on January 1 of each year, and requiring county secretaries to report to state secretaries all members in good standing, together with their per capita assessment for the current year not later than March 31. State societies desiring to do so may provide a shorter period.

3. The recommendation regarding the third question under discussion is covered by our recommendation of the second.

4. Regarding the pro-rating of dues, we recommend that this be made optional with each local society.

5. Regarding an admission fee for membership we recommend that this be made optional with local societies.

6. While the committee recognizes, as a general principle, that a uniform system of blanks for county and state societies is desirable as soon as practicable, we recommend further consideration of this question at a later conference.

7. We recommend that the House of Delegates of the American Medical Association be asked to consider the advisability of issuing charters to constituent state associations.

8. We recognize the desirability and advantage of a uniform method of transfer, but this system cannot be established until there has been developed a greater uniformity in other details of organization. We therefore recommend that this question be made the subject of discussion at a future conference.

9. The committee recognizes the value of this conference to the state association secretaries, and to the purposes of organization. It therefore recommends that future conferences of this character be held.

E. J. GOODWIN, Chairman,
WILFRID HAUGHEY,
PERRY BROMBERG,
WILLIAM S. GARDNER,
FREDERICK R. GREEN.

The *recommendations* adopted by the conference cover the two most important of the eight questions under discussion. It was felt that it was wise to proceed slowly, acting on the most essential points first, and giving the state associations time to modify their methods to conform to the recommendations of the conference. The question of uniform blanks and methods of keeping records, as well as that of a uniform transfer system, was deferred to a future conference. The advisability of issuing charters to constituent state associations was referred to the House of Delegates for consideration.

In view of the marked benefit which has resulted from bringing together the secretaries of the state associations at such a conference, the Committee recommends that the House of Delegates request the Board of Trustees to authorize a second conference of state secretaries as soon as such action may seem to them advisable, in order that the executive officers of the constituent state associations may have an opportunity for further conference on the strengthening and upbuilding of the organization.

Respectfully submitted,

DR. THOMAS MCDAVITT, Chairman.
DR. E. J. GOODWIN,
DR. E. W. WEIS,
DR. CLAUDE A. THOMPSON,
DR. JOSEPH H. MARTIN,
DR. F. R. GREEN, Secretary.

On motion, the report was referred to the Reference Committee on Legislation and Political Action.

Dr. Arthur Dean Bevan, Illinois, Chairman, presented the Report of the Council on Medical Education, as follows:

Report of the Council on Medical Education

To the Members of the House of Delegates of the American Medical Association:

For the ninth consecutive year the Council on Medical Education submits its annual report and is pleased to state that the progress reported in previous years is still being continued. The chief incidents in the work of the past year are as follows:

THE NINTH EDUCATIONAL CONFERENCE

The Ninth Annual Conference on Medical Education was held in Chicago, Monday, February 24. It was followed on Tuesday by the Conference of the Council on Health and Public Instruction and the Annual Meeting of the Association of American Medical Colleges was held. Thus at the same time and place each year the three chief agencies interested in medical education now hold their annual meetings. The annual conference started by the Council in 1905, therefore, has grown to be what may be termed an annual "congress" on medical education and licensure.

Probably the most effective work carried on by the Council has been through these annual conferences which have been regularly attended by delegates from medical colleges, state licensing boards, state medical societies, college associations, federations of state boards, university presidents and other educators. These conferences have constituted an open forum where the various problems in medical education have been taken up and given thorough and frank discussion. It was undoubtedly through these conferences that unanimity of effort by the various agencies working for an improved medical education has been secured, as a result of which such decided progress has been made.

In this connection a recent bulletin issued by the United States Bureau of Education,[1] after reproducing several pages from the Council's reports, in regard to medical education says: "No more marvelous chapter in the history of educational standards can be found than in a review of the work of these conferences."

HIGHER PRELIMINARY REQUIREMENTS ASSURED

During the last year action has been taken by various agencies by which the general adoption of higher preliminary requirements by medical colleges is made certain. In the Council's first report to the House of Delegates in 1905 an "ideal standard" was outlined which included as a *minimum* requirement of preliminary education in addition to a standard four-year high school education at least one year of collegiate work including courses in physics, chemistry, biology and a modern language. It was recommended that the work of this college year might be taken either in a college of liberal arts or in a preliminary year given by the *medical college itself.* This standard is no longer looked on as an "ideal" by medical colleges, but as the essential minimum. Previous to 1912 *approximately fifty medical colleges* and ten state licensing boards had voluntarily adopted that or a higher requirement. Last June this body aided materially in the movement by adopting a report which instructed the Council not to include in Class A, after Jan. 1, 1914, any medical college which did not require for admission at least this one additional year of preliminary work. On February 26 of the present year the Association of American Medical Colleges also adopted the same standard for all colleges in membership, to become effective after Jan. 1, 1914. Finally, on March 22, 1913, a joint committee made up of representatives of the College Association and the Council, with the advice of several experts in preliminary education, but especially that of Dr. Kendric C. Babcock, Specialist in Higher Education of the United States Bureau of Education, who was present at the meeting, adopted the following as the minimum requirement for the proposed year of college work in physics, chemistry, biology and a modern language:

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[1] Bulletin, 1913, No. 4: "Present Standards of Higher Education in the United States."

ADMISSION TO THE PRELIMINARY COLLEGE YEAR

(a) For admission to the preliminary college year, students must have completed a four-year course of at least fourteen units in a standard accredited high school, or have its equivalent as demonstrated by an examination, and a transcript of the student's work should be secured direct from the principal of the high school by the college authorities and kept on file.

Table 1.—*Standard High School Course*

SUBJECTS.	UNITS.	REQUIRED.	ELECTIVE.
ENGLISH			
READING AND PRACTICE	2	2	...
Study and Practice	1	...	1
MATHEMATICS			
ALGEBRA TO QUADRATICS	1	1	...
Algebra (Quadratic Equations, Binomial Theorem and Progressions)	½	...	½
PLANE GEOMETRY	1	1	...
Solid Geometry	½	...	½
Trigonometry	½	...	½
LATIN			
GRAMMAR AND COMPOSITION	1	1	...
CAESAR	1	1	...
Cicero	1	...	1
Virgil	1	...	1
Cornelius Nepos	1	...	1
Greek			
Grammar and Composition	1	*	1
Xenophon	1	...	1
Homer	1	...	1
GERMAN (OR FRENCH)			
ELEMENTARY	2	2	...
Intermediate	1	...	1
French (or German)			
Elementary	2	**	2
Intermediate	1	...	2
Spanish			
Elementary	2	...	2
Scandinavian			
Elementary	2	...	2
HISTORY			
AMERICAN HISTORY AND CIVIL GOVERNMENT	1	1	...
Greek and Roman History	1	...	1
Medieval and Modern History	1	...	1
English History	1	...	1
Science †			
Botany and Zoology, each	1	...	1
or Biology	1	...	1
Chemistry	1	...	1
Physics	1	...	1
Physiography	½	...	½
Physiology	½	...	½
Agriculture	1	...	1
Drawing	1	...	1
Manual Training	1	...	1
Domestic Science	1	...	1
Music			
Appreciation or *Harmony*	1	...	1
Total	38½	9	29½

A *unit* is the credit value of at least 36 weeks' work of 4 or 5 recitation periods per week, each recitation period to be of not less than 40 minutes. In other words, a unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work. A satisfactory year's work in any subject cannot be accomplished under ordinary circumstances in less than 120 sixty-minute hours, or their equivalent.

Required Branches: Of the 14 units of high-school work the subjects in capitals aggregating 9 units are required. Other work to the amount of at least 5 units may be made up from any of the other subjects of the above schedule.

* Two units of Greek may be substituted for the two required units of Latin.

** Two units of French may be substituted for the two required units of German.

† Credentials of each science course must include evidence of laboratory work.

(b) The required and elective subjects for which credits for admission to the preliminary college year may be accepted are shown in Table 1.

THE PRELIMINARY COLLEGE YEAR

At a joint meeting of the committees representing the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association held March 22, 1913, and with the advice of Dr. Kendric C. Babcock, Specialist in Higher Education of the United States Bureau of Education, the following requirements *were adopted for the* preliminary college year:

(a) The preliminary college year shall extend through one college session of at least thirty-two weeks of *actual instruction*, including final examinations.

(b) In excellence of teaching and in content, the work of this preliminary college year shall be equal to the work done in the freshman year in standard colleges and universities.

(c) This preliminary college year shall include courses in physics, chemistry, biology and German or French, each course to embrace at least eight semester hours of didactic and laboratory work in each subject as shown in Table 2, provided that a student may satisfy the requirement of physics in presenting one unit of high-school physics and completing a half year of college physics which continues and does not duplicate the work done in the high school.

(d) In medical colleges planning to give the work of the preliminary year, provision should be made for full-time expert teachers in the various subjects. Sufficient equipment should be provided to enable the students to do the work intelligently—in amount such as will compare favorably with the equipment for these courses in standard colleges and universities.

(e) It should be remembered that the chief object of the work of the preliminary college year is to provide the student with a training that will enable him to enter more readily and intelligently on the study of the fundamental medical sciences in the medical school.

Table 2.—Schedule of Work of College Year

Subject.	Lectures or Recitations Per Week	Laboratory Periods * Per Week	*Total* Hours Per Semester	Total Semester Hrs. Per Year.
Physics, 1...	2	2	4	8
Chemistry, 1.	2	2	4	8
Biology, 1...	2 or 3	2 or 1	4	8
German or French, 2..	4 or 3	....	4 or 3	8 or 6
Totals.....	10	6 or 5	16 or 15	32 or 30

* Each laboratory period must extend over at least two hours.

Or, Expressed in Class Hours:

Subject	Total Hours Lectures, or *Recitations*	Total Hours Laboratory Work	Total Minimum Hours Didactic and Laboratory
Physics, 1....	64	128	192
Chemistry, 1..	64	128	192
Biology, 1....	64 or 96	128 or 64	192 or 160
German or French, 2...	128 or 96	....	128 or 96
Totals	320	384 or 320	704 or 640

COLLEGES AND STATES HAVING HIGHER ENTRANCE REQUIREMENTS

The thirty-two medical schools which are now requiring as a minimum for entrance two or more years of work in a college of liberal arts in addition to a four-year high-school education are as follows:

College	Began
Johns Hopkins University, Medical Department	1893
Harvard Medical School	1900
Western Reserve University Medical Department	1901
University of Chicago, Rush Medical College	1904
University of California, Medical Department	1905
University of Minnesota, College of Medicine and Surgery	1907
University of North Dakota, College of Medicine	1907
University of Wisconsin, College of Medicine	1907
Cornell University Medical College	1908
Wake Forest College, School of Medicine	1908
Leland Stanford Junior University, Department of Medicine	1909
Yale Medical School	1909
University of Kansas, School of Medicine	1909
University of Michigan, College of Medicine	1909
University of Nebraska, College of Medicine	1909
University of South Dakota, College of Medicine	1909
University of Colorado, School of Medicine	1910
Indiana University School	1910
State University of Iowa,	1910
Medicine	1910
	1910
artment of Medicine	1910
	1910
of Physicians and Surgeons	1910
of Medicine	1910
lical Department	1910
artment	1910
School	1911
Medicine	1912
Department	1912
v. of Cincinnati	1913
of Medicine	1913

The following six medical schools have announced the adoption of the two-year collegiate requirement to take effect in the year given:

University of Georgia, Medical Department	1914
University of Illinois, College of Medicine	1914
University of Louisville Medical Department	1914
Fordham University School of Medicine	1914
University of Alabama, School of Medicine	1915
College of Medical Evangelists, Loma Linda, Cal	1915

The twenty-four following colleges require, in addition to a four-year high-school course, one year of college work in physics, chemistry, biology and a modern language, the requirement beginning in the year given:

College	In Force
Howard University, School of Medicine	1910
Tulane University, Medical Department	1910
St. Louis University, School of Medicine	1910
University of North Carolina, School of Medicine	1910
University of Oregon, Medical Department	1910
University of Texas, Medical Department	1910
University of Virginia, Department of Medicine	1910
Fordham University, School of Medicine	1911
West Virginia University, School of Medicine	1911
Medical School of Maine	1912
University of Michigan, Homeopathic College	1912
University and Bellevue Hospital Medical College	1912
Leonard Medical School	1912
University of Vermont, College of Medicine	1912
University of Illinois, College of Medicine	1913
Tufts College Medical School	1914
Cleveland-Pulte Medical College	1913
Hahnemann Medical College, Philadelphia	1913
Jefferson Medical College	1913
Medico-Chirurgical College of Philadelphia	1913
Temple University,	1913
Woman's Medical	1913
Baylor University,	1913
Marquette Univers	1913

The seventeen following medical colleges have intimated that, beginning in 1914, they will require for admission, in addition to a standard four-year high-school education, the premedical college year devoted to courses in physics, chemistry, biology and a modern language:

College	In Force
College of Physicians and Surgeons, Los Angeles	1914
Oakland College of Medicine and Surgery	1914
George Washington University, Medical Department	1914
Bennett Medical College	1914
University of Louisville, Medical Department	1914
College of Physicians and Surgeons, Baltimore	1914
University of Maryland, School of Medicine	1914
Boston University, School of Medicine	1914
Detroit College of Medicine	1914
John A. Creighton Medical College	1914
Albany Medical College	1914
University of Buffalo, Medical Department	1914
Starling-Ohio Medical College	1914
State University of Oklahoma, School of Medicine	1914
Vanderbilt University Medical Department	1914
Medical College of Virginia	1914

After Jan. 1, 1914, therefore, there will be at least seventy-five medical colleges which will have put into effect entrance requirements of at least one year of college work including courses in physics, chemistry, biology and a modern language.

HIGHER PRELIMINARY REQUIREMENTS BY STATE BOARDS

There are now twelve state medical licensing boards which have adopted preliminary requirements in advance of a four-year high-school education. These are as follows:

State Examining Board of	No. of Years Required.	Affects Students Matriculating.	Affects all Applicants.
North Dakota	2	1907-08	1911
Iowa	2	1907-08	1911
Minnesota	2	1908-09	1912
Colorado	2	1910-11	1914
Connecticut	1	1910-11	1914
Kansas	1	1910-11	1914
Indiana	2	1910-11	1914
Utah	1	1910-11	1914
South Dakota	2	1911-12	1915
Vermont	1	1912-13	1917
Pennsylvania	1	1913-14	1918
Kentucky	2	1914-15	1918

THIRD CLASSIFICATION OF MEDICAL COLLEGES

Following the completion of the Council's third complete inspection of the medical colleges in the United States another classification was prepared. It was presented to this body in the Council's report last year and was ordered published. After a careful review of all the data the classification was published Jan. 18, 1913. This classification made reference to 118 medical colleges as shown in Table 3.

TABLE 3.—THIRD CLASSIFICATION OF MEDICAL COLLEGES

	Class A+	A	B	C	Total
Giving complete course	22	35	23	29	109
Giving two years only	2	6	1	..	9
Totals	24	41	24	29	118

In the three inspection tours which have now been completed, data along the same identical lines was collected from all colleges in order to secure information on which standards could be based. These standards are now fairly well fixed so that hereafter all inspections made can be of a more constructive nature, and the Council will be in a better position to point out to the officers of each college inspected such changes as may be made to the best advantage. Such statements heretofore have been sent only to such colleges as have requested them.

Since our last report the rating of the University of Georgia Medical Department, at Augusta, has been raised from Class B to Class A and the rating of the Medical College of the State of South Carolina has been raised from Class C to Class B because of very decided improvements. Both of these institutions have been granted full control of the attending staffs of the city hospitals and have carried on very successful campaigns for funds. The former raised $45,000 in subscriptions from the citizens of Augusta, and the city officials have agreed to give the medical school in perpetuity $10,000 per year. The latter has just secured legislation making it a state institution securing also a state appropriation of $10,000. In a more recent ten-day campaign $76,000 was obtained in subscriptions from the citizens of Charleston for the immediate development of the school.

MEDICAL EDUCATION IN THE SOUTH

A word should be said regarding medical education in the South. Time and again in the Council's annual conferences and elsewhere, the South has been referred to as a section of the country in which the medical schools needed to be given a special dispensation or needed special nursing in order to bring them to the same plane as the northern colleges, and in former years there was perhaps some basis for such references. But, gentlemen, these references no longer apply to the South and the Southern delegates are themselves beginning to vigorously protest against them. The fact is that in no section of the country has the Council on Medical Education had a more hearty cooperation, than on the part of the medical college men of the South, and in no section of the country have improvements in medical education been greater than in those of the southern states. Tennessee, which formerly had twelve medical schools, now has only five and three of these, including one negro school, have undergone a remarkable development. In Alabama, Arkansas, Mississippi, Oklahoma and South Carolina there are now single medical schools supported and controlled by the state. We have just referred to the improvements of the University of Georgia and the Medical College of South Carolina. The same development has been going on in the medical schools in practically every Southern state.

Misgivings have been expressed regarding the adoption of higher entrance requirements in the South. The chief argument advanced against the requirement of higher preliminary standards in the South is that there is such a diversity of secondary schools, but this is really the strongest argument in favor of the higher requirement since in the preliminary college year the student's preliminary qualifications can be more positively ascertained and the student clearly needs the additional training. The colleges themselves have vigorously grappled with the problem, however, and have practically settled it. Already eight medical colleges in the South have established the higher requirements. These are the Universities of Texas, Tulane, Alabama, North Carolina and Virginia and also Baylor University, Wake Forest College and the Leonard Medical School. The University of Georgia has announced the adoption of the higher requirement to take effect in 1914 and the Medical College of Virginia and Vanderbilt University have intimated similar action. With all these colleges taking the definite stand for the increased requirement it will not be difficult for the Universities of Arkansas, Oklahoma, Mississippi and Tennessee and the Medical College of South Carolina, each of which has a clear field in its state, to adopt a similar requirement. It is quite evident, therefore, that the South needs no special dispensation on this score.

The South has not only demonstrated that it can hold its own in regard to medical education but in some respects it has furnished splendid examples which are aiding in the solution of educational problems elsewhere. The generosity with which the people of several Southern cities have come to the support of their local medical schools has shown what may be done in the cities of other sections of the country. The officials of southern cities also have been quick to see the importance of placing the care of the patients in the city hospitals and the sick poor of those cities in the charge of the faculties of good medical schools. Taken as a whole, progress in medical education in the south is very encouraging and is fully on a par with that throughout the country.

FURTHER DECREASE IN THE NUMBER OF MEDICAL SCHOOLS

As has been stated in a previous report, there were, in 1904, 166 medical schools in the United States, which was nearly one-half of the world's supply. Since that time, very largely since 1907 when the first classification of colleges was prepared, the decrease in the number of schools has been quite rapid. This has been brought about partly by the disappearance of the commercial medical schools which have gone out of existence, but more largely through the merger of several small schools in each of numerous localities leaving in each instance one larger and stronger school such as was done in Louisville, Kentucky, where five colleges merged into one. The same thing occurred in Indiana, Minnesota, Iowa, Tennessee, and elsewhere. The number of medical schools will be about 110 at the end of the present college session.

The figures showing the colleges which have been closed by merger and otherwise since 1907 are given in Table 4.

TABLE 4.—Colleges Closed Since 1907

Year	Class A		Class B		Class C		Totals		Total Closed
	Merged	Extinct	Mg.	Ext.	Mg.	Ext.	Mg.	Ext.	
1907	3	....	3	1	......	3	6	4	10
1908	2	....	2	......	1	4	5	4	9
1909	3	1	2	......	......	7	5	8	13
1910	1	....	3	......	3	6	7	6	13
1911	....	....	3	......	1	3	4	3	7
1912	2	....	......	......	......	3	2	3	5
1913	3	....	1	......	4	......	8	......	8
	14	1	14	1	9	26	37	28	65

This decrease in the number of medical colleges has not been to the detriment of medical education but to its advantage. It has not removed or lessened the opportunities for students to study medicine, but has resulted in giving them better opportunities. It has resulted in reducing the abnormal over supply to a smaller number but a better grade of medical schools.

COST OF TEACHING MEDICINE

Definite reports from sixty-five medical colleges show that the expense of teaching each student ranges from one and one-half to several times the amount that the student pays in fees. The average amount paid out per student by the sixty-five colleges was $410 while the average amount received in fees was $122. The excesses of cost over income per student in several schools were respectively: $2,774, $1,863, $897, $747, $730, $673, $518 and $500. The excess of expense over income from fees per student was over $200 in twenty-eight of the medical colleges which reported. It is safe to say that with the same equipment and at practically no additional expense these schools could easily accommodate two, three, or in some instances several times the number of students at present enrolled which would greatly reduce the disproportion of expense over income from fees. A further reduction in the vast oversupply of medical schools in this country will, therefore, be clearly in the interests of economy and will be of marked advantage to medical education.

While the cost of teaching medicine has been greatly increased the cost to the individual student has been only moderately increased. The cost to the student in some of the Class C medical schools is much greater than in some of the best university schools. Some of the state university medical schools charge fees as low as $50 to $80 per year, where, on the other hand, some Class C colleges demand that the student pay fees as high as $100 to $175 per year. Any plea for the continued existence of low grade colleges in the interest of the "poor boy" therefore, is apparently more for the boy who is poor in scholarship rather than for the boy who is poor in purse. There is no reason why any student should spend his time and money in a low grade college, the diplomas of which are now not recognized in many states when in the same time and for even less money he can get a thorough medical training in one of several of the best equipped colleges in the country.

The facts just given emphasize the sheer folly of starting new medical colleges unless those colleges are sufficiently well endowed or are otherwise adequately financed and equipped as thoroughly as the best of the colleges now existing.

FULL-TIME, EXPERT TEACHERS

Reliable information from all medical schools obtained during the third tour of inspection shows that in the 117 medical schools existing during 1912 there were altogether 876 full-time, salaried teachers and of this number 490 had professorial rank. This is an average, therefore, of eight full-time teachers to each school including between four and five which had professorial rank. Excluding about thirty colleges which had not a single full-time teacher, the average number for each of the remaining schools was ten of which six had professorial rank. Since a marked increase in the number of such teachers has been made since the third tour of inspection was made, the average number for each school is now undoubtedly higher.

STATE UNIVERSITY MEDICAL SCHOOLS

Twenty-seven states now have medical schools as integral parts of the state universities or—in one instance—under state control as separate institutions. These states and other interesting data regarding the medical schools are shown in Table 5.

TABLE 5.—STATE UNIVERSITY MEDICAL SCHOOLS

Medical School of State University of	Only School in State	Length of Med. Course in Years	Years of College Work for Admission
Alabama	1915	4	..[2]
Arkansas	Yes	4	......
California	......	4	2
Colorado	Yes	4	2[3]
Georgia	......	4	..[1]
Illinois	......	4	..[1]
Indiana	Yes	4	2[3]
Iowa*	Yes	4	2[3]
Kansas	Yes	4	2
Michigan*	......	4	2
Minnesota	Yes	5	2[3]
Mississippi	Yes	2	......
Missouri	......	2	......
Nebraska	......	4	2
North Carolina		2	1
[illegible]		2	2[3]
[illegible]		4	......
Oregon	Yes	4	1
South Carolina	Yes	4	......
South Dakota	Yes	2	2[3]
Tennessee	......	4	......
Texas	......	4	1
Utah	Yes	2	2
Vermont	Yes	4	1
Virginia	......	4	1
West Virginia	Yes	2	1
Wisconsin	......	2	2

*Have Homeopathic Departments.
1. To require 2 years in 1914.
2. To require 2 years in 1915.
3. Similar requirement by Licensing Board.

In fifteen states no other medical schools exist, medical education in the state being entirely in charge of the state university. This will be true in Alabama also in 1915, when an independent medical school now existing will have been converted into a postgraduate institution.

Of the twenty-seven state medical schools, twenty give the complete medical course and grant M.D. degrees while seven give only the first two years of the medical course. Minnesota now requires a five-year course, the fifth year to be spent by the student in a hospital as an intern, or in other recognized clinical work.

As may be noted in Table 3, thirteen of these state university medical schools are now requiring for admission two years of collegiate work. The medical schools of the Universities of Georgia and Illinois have adopted the two-year requirement to become effective in 1914. The medical school of the University of Alabama has announced the two-year requirement to take effect in 1915. As already shown the state schools are supported in this requirement by the state licensing boards in Colorado, Indiana, Iowa, Minnesota, North Dakota and South Dakota. Of the fourteen other state university medical schools eight are still requiring for admission a standard four-year high-school course and six are requiring in addition one year of collegiate work.

THE HOSPITAL INTERN YEAR

A beginning has been made toward a classification of hospitals according to their having sufficient patients, equipment, methods, and a willingness to furnish a satisfactory training for interns. Extensive reports have been secured from a large majority of the hospitals and from these a provisional classification will be prepared. Meanwhile some very interesting information has been secured bearing on the hospital internship.

To the 924 hospitals having 100 or more beds a letter was sent asking the number of interns at present in service. Of the 822 from which replies have been received, 279 report they have no interns and 543 report a total of 2,423 interns now in active service. Letters were sent also to about 1,500 hospitals having from twenty-five to 100 beds. Of the 1,363 which have replied, 1,054 report no interns while 309 report 583 interns in active service. Altogether, therefore, 852 hospitals report 3,006 interns in active service. Since there are only about 4,500 medical graduates each year there are still about 1,500 graduates for whom to provide internships, and there are about 1,400 hospitals having altogether approximately 135,000 beds which at present have no interns. There is every reason to believe that a special campaign carried on among these hospitals will result in providing an opportunity of an internship for every medical graduate.

From another standpoint some figures have been obtained that are interesting. Reports from over half of the medical schools indicate that of their graduates of 1912, about 70 per. cent. obtained internships. Many of the colleges reported that all their graduates might have had internships had they so desired and that they could not supply the demand from hospitals for interns. In reply to the question why all graduates did not get internships the general reply was because the graduates concerned "did not want them," because they were going "directly into practice" or "they were married." Only six colleges reported that there were not enough hospital places offered, but it is quite apparent that if these colleges carry on a campaign among the hospitals in their states or sections that internships for all can be secured.

From these figures it will be seen that a definite requirement by state medical boards of a hospital internship as a prerequisite for license can be made possible within the next few years, without working a special hardship on any of the parties concerned. On the contrary, such a requirement would aid the hospitals seeking interns, it would greatly aid the recent graduates by furnishing them a practical hospital experience, and it would undoubtedly be of great value to the public since they would be supplied with better trained doctors.

STATE MEDICAL LICENSING BOARDS

As is now generally well understood, and as has been frequently stated in the Council's reports and publications, the only legal control over medical colleges and medical licensure in each state is that which may be given by the medical practice act to the state medical examining board. In the forty-nine states and four or five territories of this country, therefore, the national constitution provides for as many sources of control. The medical practice acts in these different states vary widely, from those which leave a wide open door to the ignorant, the incompetent, the quack and the impostor, to those which provide for the registration only of competent, well trained practitioners of medicine. Some state legislatures passed very excellent practice acts but later nullified these by enacting other measures providing short-cuts and lower educational standards for such as shrewdly called their medical practice by some other name. The greatest difficulty, therefore, which hinders the proper control of medical licensure in the United States is due to the multiplicity of legal bodies which have the licensure in control. Because of this multiplicity both of boards and of standards incompetents and impostors have but little difficulty of securing the privilege of carrying on their practices, no matter how iniquitous they may be, even in some of our most enlightened commonwealths. If a physician has his license in one state revoked for cause, he promptly moves into an adjoining state and secures a license to continue his crooked practice until caught again. With so many different boards and such a wide division of authority it is exceedingly difficult either to get proper legislation or to enforce it after it has been secured. The great problem in medical licensure, therefore, is: How to secure a close cooperation between the various state licensing boards by which unanimity of action, uniformity of standards and equally thorough methods and examinations may be obtained.

A SINGLE FEDERATION OF STATE MEDICAL BOARDS

Recognizing this need of cooperation there has recently been organized the Federation of State Medical Boards resulting from the effort to merge the two Confederations which have been in existence for several years. Under the new constitution this Federation gives promise of doing effective work and it certainly has a great opportunity. It is hoped that all state medical boards will unite with this organization, not only for the added protection it will furnish for the individual state but also for the great good that can and needs to be accomplished for the country as a whole.

NON-RECOGNITION OF LOW GRADE COLLEGES

Prior to the general inspection of all medical colleges by the Council on Medical Education, it was difficult or impossible for each state licensing board to know the character of the work done by even the colleges in its own state let alone what was being done by medical schools in distant parts of the country. Many boards were without authority either to make such investigations, or the funds necessary were not available. No accurate data on which standards could be based had been collected and therefore all medical colleges were "recognized" by practically all state boards unless perchance some college was caught redhanded in the selling of diplomas.

Since standards based on reliable data have been fixed, however, and since classifications of colleges have been published such state boards as have authority to discriminate between colleges have been exercising more or less their discretion in withdrawing recognition from medical colleges of low grade. Some boards, particularly during the past year, have adopted resolutions refusing to longer recognize the diplomas of any medical school rated in Class C. Other boards have prepared lists of their own, an examination of which, however, shows that few, if any, Class C colleges are included. In several states the Class C colleges located in those states are still retained on the recognized list, but not those located in other states. Some of these boards, however, are laboring with the local schools in an effort to secure improvements. From correspondence conducted during the year in the interests of prospective medical students who have the right to know whether the diplomas they receive are to be generally recognized or not, it is apparent that a large majority of colleges of the Class C type are now not fully recognized by the following state boards:

Alabama
Arkansas (Reg.)
Colorado
Connecticut (Reg.)
Delaware
Indiana
Iowa
Kentucky
Louisiana (Reg.)
Maryland (Reg.)
Michigan
Minnesota
New Hampshire
New Jersey
New York
North Dakota
Ohio
Pennsylvania
Rhode Island
Texas
Vermont
Virginia
West Virginia
Wisconsin

PROGRESS IN NINE YEARS

That great progress in medical education has been made in the last nine years shows more than anything else that improvements were greatly needed. Had this country, like other nations, had a national control over educational matters, there would probably have been no need for a Council on Medical Education. The serious conditions previously existing were doubtless due to the fact that the control of education was left to the fifty different states and territories, and that in many of the states no effective means of control had been provided. There was, therefore, great need of a national influence over matters pertaining to medical education and that influence was provided by the American Medical Association, the organization naturally best fitted to furnish it, even as the American Bar Association exerts a powerful influence in legal matters throughout the country.

The work of the American Medical Association through its Council on Medical Education is, of course, purely voluntary, and the results have come essentially from the formation of public opinion through publicity regarding existing conditions and needs as shown by standards and conditions elsewhere. After all, no force can bring improvements of such permanent nature as that of public opinion. In a republic such as the United States even laws are not very effective unless there is a strong public opinion in favor of them.

There are numerous other reasons, however, which in part account for the gratifying progress which has been made in medical education and which are worthy of mention:

(a) Many of the medical colleges had long realized the great need of improvement and quickly responded as soon as the Council's investigations had indicated what improvements were most needed.

(b) Through the annual conferences of the Council there has been a hearty cooperation between the several agencies working for an improved medical education.

(c) The Council in its work has had effective cooperation from medical colleges both individually and through the Association of American Medical Colleges. This is true also regarding state licensing boards both individually and through their national organization, now the Federation of State Medical Boards.

(d) Much credit for the progress made should go to the physicians of many of the medical college faculties who, with an enthusiasm most admirable, have responded to the standards held out by the Council, have readily set aside personal interests and ambitions, and have voted to merge their colleges with others, or even to close them outright in order that better conditions in medical colleges might prevail.

(e) The campaign carried on by the Council has been entirely in the open. By public conferences, the consensus of opinion regarding the various problems has been obtained. Its inspections have been generally welcomed, often have been invited and have always been made with the knowledge of the college officials. Its work has been constructive and not destructive and its standards are suggestions, not demands. No force has been exerted aside from that of publicity and even this has been used to set forth in general ideals and needs, and not to expose the defects of individual colleges. To the honor of the medical profession and of the medical colleges in particular, it can be said that the greatest proportion of the progress made has been by the voluntary action of the colleges themselves and not by compulsion.

(f) The general clearing house of information regarding medical education and licensure which has been established by the Council has rendered inestimable service. Through the information secured by the inspection of colleges and by the collection of statistics from medical schools, state licensing boards, foreign countries and other reliable sources much reliable information was made available which was formerly not to be obtained anywhere. Much of this information has been published in The Journal of the American Medical Association and in reports and pamphlets. Information thus obtained furnished a reliable basis on which reasonable standards could be constructed, and following these standards, marked improvements were made possible. This information has been of service not only to the colleges but also to state licensing boards, and as a result rapid progress has been made toward higher requirements in the various states, uniform with the higher requirements adopted by medical colleges.

(g) The most important factor back of the progress made in recent years, however, is the perfect sympathy in an improved medical education, held by the great majority of the rank and file of the medical profession of this country who constitute the American Medical Association. It was in response to this demand in 1846 that the American Medical Association was organized and again in 1904 when the permanent Council on Medical Education was created.

The work of the Council has not been without opposition. On the contrary one of the best evidences that progress has been made is in the opposition that has been stirred up. No reform movement can ever amount to much if it fails to stir up active opposition. There are always those whose practices cannot stand the light of publicity and who, therefore, oppose those who are turning on the light. It was not to be expected that those in control of certain colleges which were accepting students' fees and giving in return as little as possible, would quietly acquiesce in a movement which was seriously interfering with their profits. The motives of those back of the opposition, however, have been so apparent as to scarcely require comment in this report.

IMPROVEMENTS STILL NEEDED

The work in connection with medical colleges has now reached a stage where an American standard of medical education is well fixed and the chief efforts should be not so much toward higher standards as in securing internal improvements, better teachers, better hospital and dispensary facilities, more research and above all greater endowments.

The marked improvements made in medical colleges in recent years reveals in marked contrast the improvements needed in medical licensure. Many states need better medical practice acts. In each state there should be a single board in control and a single educational standard by which all practitioners of the healing art should be measured regardless as to the particular methods of treatment to be followed. The very best men available should be selected as members of the licensing boards and if possible these boards should be taken out of politics. Examinations should be made more practical and thorough whereby a student would have to show evidences of actual training rather than of cramming in quizzes or from compends.

Meanwhile Canada has just established a Canadian Licensing Board which will provide an examination, the passing of which will secure a license recognized throughout Canada. It is worthy of consideration whether something similar cannot be done in this country. Some voluntary arrangement might be considered. The examinations given by the College Entrance Examination Board are now given general recognition by colleges and universities. Is it too Utopian to believe that a Medical Examining Board could be established in this country whose examinations might prove acceptable to a large number if not all of the state licensing boards? The methods by which such a board might be established are suggested in the address made by Mr. Frederick G. Hallet at the Council's Conference two years ago, as well as the character of the examination which should be given. Possibly the new Federation of State Medical Boards may be able to take this up.

IN CONCLUSION

Although great progress has been made, there still remains much to be done. The work should be continued until this country shall rank second to no other in the excellence of its medical schools and in the quality of the physicians who are to have the responsibility of caring for the sick.

Respectfully submitted,

Arthur Dean Bevan, Chairman.
James W. Holland,
Victor C. Vaughan,
George Dock,
William D. Haggard,
N. P. Colwell, Secretary.

At the conclusion of the report, Dr. Bevan said: In spite of the weaknesses I have pointed out under these five statements, here and there in the United States there is a splendid development in the whole situation of medical education, and the members of the House of Delegates can look forward confidently within the next few years to such a condition of affairs as this: A reasonable number of medical schools on a scientific basis, with good medical courses, with compulsory intern years as an American standard.

The report was then referred to the Reference Committee on Medical Education.

Dr. Arthur T. McCormack, Kentucky, moved that the amendments to the Constitution be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Motion seconded and carried.

The proposed amendments are as follows:

Amendments to Constitution

At the 1911 session, the Reference Committee on Amendments to the Constitution and By-Laws recommended the following amendments to the Constitution:

Amend Article 11 of the Constitution by striking out in the first, second and third lines the words "by an equal assessment of not more than ten dollars annually on each of the members."

Amend Article 3 of the Constitution by striking out the entire paragraph and inserting after the title of the article the following:

> All members in good standing of the component societies or their constituent branches shall be members of the American Medical Association.
>
> Any member may become a fellow of the American Medical Association by making application on a prescribed form and fulfilling such conditions as may be required by the provisions of the By-Laws.

At the 1912 session these proposed amendments were referred to the Judicial Council with instruction to report thereon to the House of Delegates in 1913.

At the 1912 session, the Reference Committee on Amendments to the Constitution and By-Laws recommended the following amendments to the Constitution:

Amend Article 10, Section 2, of the Constitution by adding the following:

> "and the President, Secretary and Editor of The Journal shall be members of the Board of Trustees without the right to vote."

Dr. G. Wythe Cook, District of Columbia, stated that at the meeting of the House of Delegates, held in Atlantic City last year, he offered a resolution asking that the Medical Association of the District of Columbia be changed to the Medical Society of the District of Columbia, and that this resolution was referred to the Reference Committee on Miscellaneous Business; but in looking over the minutes, he had found that no report was made with regard to it. He would like to have it appear in the record that this change in the name of the society was authorized.

Dr. Arthur T. McCormack, Kentucky, moved that the resolution referred to by Dr. Cook be considered as reintroduced and be referred to the Reference Committee on Miscellaneous Business.

Motion seconded and carried.

The President called for the Report of the Committee on Red Cross Medical Work, Dr. George M. Kober, District of Columbia, Chairman.

The Secretary moved that the House do now adjourn in memory of Dr. Daugherty, and that the Report of the Committee on Red Cross Medical Work be made the first order of business at the afternoon session.

Motion seconded and carried.

Accordingly, the House then adjourned until 2 p. m.

(To be continued)

Society Proceedings

COMING MEETINGS

Maine Medical Association, Portland, July 2-3.
Washington State Medical Association, Everett, July 14.

AMERICAN ASSOCIATION FOR CANCER RESEARCH

Sixth Annual Meeting, held in Washington, D. C., May 5, 1913

Can the Number of Cures of Cancer Be Increased by Early Excision?

Dr. J. C. Bloodgood, Baltimore: The statistics for the last five years show that the relative number of benign tumors of the breast is increasing. I can show that if a lump in the breast is removed within a few weeks, certain types of malignant breast tumors will disappear. Pain is more common in the benign than in the malignant tumors. Therefore one should not wait until pain is present. I think that in the next five years, owing to the education which we are instituting along this line, we shall notice tremendous changes in the results of operations for malignant disease.

DISCUSSION

Dr. William B. Coley, New York: Dr. Bloodgood's figures are a striking demonstration of what may be hoped for from improved resources in surgery. They also show that we must educate the medical profession. The reason we have not received cancer cases earlier is not so much that the patients do not go to the doctor as that the doctor has felt that the tumor was possibly not malignant, and that it would be better to wait for later symptoms, particularly pain, to develop. Pain is quite unimportant as a diagnostic point. Most lesions cause little or no pain until they are too far advanced to be cured. I believe that when cases of melanotic tumors prove fatal after surgery, this is because the surgeons have waited until there was ulceration.

Dr. Robert B. Greenough, Boston: I approve of restricting the efforts of this society to the instruction of the medical profession regarding the early cases of cancer; but I do not feel that the whole responsibility rests with them, particularly for tumor of the breast. Individual patients are more at fault than is the physician; this is partly due to the absence of pain, partly to the despair that the patient feels of securing a radical cure, and partly, also, to the desire to avoid mutilation. If we attempt to carry the non-mutilating operation too far, we shall run a serious risk of having the disease followed by carcinoma.

Dr. J. C. Bloodgood, Baltimore: I have endeavored to demonstrate the great increase in the number of cures from the radical excision of the beginning lesion. The surgeon also needs education regarding the proper treatment of the beginning lesion; an incomplete cutting operation in the very early stage of cancer is worse than delay. In the past women have come to the surgeon months or years after the lump was first noticed. If women were educated to have the tumor explored the day after it is seen or felt, their chances of cure would be 80 per cent. or more. To excise a piece for diagnosis without burning the area in the skin is a dangerous procedure. There is really no necessity for taking out a piece for diagnosis. The nodule is so small that it can all be removed readily. This excision or the use of the Paquelin cautery is sufficient for a cure. The result depends not only on making the diagnosis early, but also on the surgeon's knowing when to remove the growth.

Education of the People as to What Can Be Done in Early Cases of Cancer.

Dr. Thomas S. Cullen, Baltimore: It is absolutely necessary that people be enlightened as to how to diagnose cancer early, and as to what can be done for them in the early stages. If the women are educated to this, they will get after the men. Information on this point should be and is being published in magazines read exclusively by women. They are being told what constitutes cancer symptoms, and this will mean that a large percentage of the cases will be cured.

The Incidence and Inheritability of Cancer in Mice

Dr. Maud Slye, Chicago: During my work on heredity I accumulated a stock of 5,000 mice of known ancestry and pedigree. At the end of three years tumors began to appear spontaneously among the mice then in stock. With this stock of mice in which tumors had appeared spontaneously, I began my work on cancer. I have now 9,000 mice. All the mice were allowed to die a natural death and the necropsy was made as soon as possible afterward. I have eliminated contact and contagion in cancer by dividing my mice into four sections, which were never interchanged. We are compelled to use the mice in breeding before cancer has developed, so that it is hard to tell whether those which have been selected for breeding would have had cancer or not. If you wait till the cancer develops you run the risk of having no offspring or of having the mother too feeble to bring them up, or of having the offspring too feeble to produce other generations. I am using methods of breeding before and afterward. I have done 4,500 necropsies and have found 271 cases of unquestioned tumor.

DISCUSSION

Dr. Leo Loeb, St. Louis: In our work we have noticed that some strains of mice have 100 per cent. incidence of cancer, and others considerably less, so that it is likely that heredity plays a great rôle.

Dr. Harvey R. Gaylord, Buffalo: We have had a great deal of trouble with vermin in our work, and I wonder to what extent Dr. Slye was able to control this in hers. Her charts showed that the most constant factor in producing the disease is the affection of the mother. I wonder if her work showed differences of susceptibility in the offspring when only the other was affected and when both the father and mother had the disease.

Dr. H. Gideon Wells, Chicago: I will assume responsibility for the histologic diagnoses in Dr. Slye's cases. When there has been any question as to malignancy, the doubt has been given in favor of the non-malignancy of the tumor. When it is diagnosed as sarcoma or carcinoma, the criteria have been applied in such a way that, if the specimen had been from a human being, we should have recommended a radical operation.

Dr. William B. Coley, New York: There is a strong hereditary influence in the causation of cancer. A man had a round-cell sarcoma of the parotid, and his two daughters had sarcoma of the breast. This tendency to different types I have observed in a number of different instances.

Dr. Richard Weil, New York: If this result presents an analogy with the mendelian law, it would appear that it has a marked dominant characteristic—the tendency, I mean, to degeneration of the tissues. Aside from the ordinary routes of infection, there is the possibility of infection through the placenta. The fact that the females develop tumors in the breast, while the males develop them in the lung, would seem to rule out infection and show that it is a tendency toward cancerous degeneration of the tissues.

Dr. Leo Loeb, St. Louis: In my work the age of the offspring does not vary; it has the tumor at approximately the same age as the mother.

Dr. James Ewing, New York: If all the strains showed this heredity, then it is stronger in mice than in man. Nevertheless, I should feel a great hesitation in applying these observations in mice to cancer in man.

Dr. Maud Slye, Chicago: I should hesitate to apply the rules of Mendel's work on dominance and recessiveness to a subject so difficult to investigate from the point of view of inheritability as cancer. If you throw gray mice, house-mice and albino mice, of pure-bred strains, into a cage together, in reasonably even numbers, you will find inside of three weeks that the house-mouse is no longer the dominant. In three years you will have almost entirely albino mice, and no house-mice. The house-mice can produce both the albino mice and the house-mice; but the albinos can produce nothing but the albinos, if they breed with house-mice. I have made no test concerning immunity. The problem of ruling out the carrying of infection by means of vermin, I found positively appalling. The mice are subject to vermin no matter what you do; but all are equally at their mercy—vermin do not pick out the cancer strains particularly. After all the work that has been done the great dominance of cancer has been found to be among the females alone, whereas the lung tumors divide quite evenly between the males and familes. The mice that I have carried through twenty-three generations are the Japanese dancing mice, which in my work have shown no tendency to cancer.

Passive Immunization against Rat Sarcoma; Immune Substances in the Blood of Rats Recovered from Tumor

Dr. Richard Weil, New York: Rats which recover from their tumors are immune to subsequent implantation in more than 90 per cent. of the cases; but our experiments along the line of injecting immune plasma into normal rats, to protect them against subsequent implantation and growth of tumor, do not justify the view that the blood of recovered rats carries the factor of immunity. The conclusion is drawn that it is impossible by means of passive sensitization of guinea-pigs to demonstrate the presence of immune substances in the blood of rats recovered from implanted sarcoma.

DISCUSSION

Dr. S. P. Beebe, New York: Dr. Crile and myself have made the same kind of experiments as Dr. Weil, except that a considerably larger quantity of blood was transfused directly into the vein of the tumor-bearing animal, from the animal that had recovered. This was followed by recovery in the tumor-bearing animal. In dogs we used considerably larger quantities of material in the transfusion. We added a great deal more blood proportionately than the rat weighed—15 or 16 gm. received when 100 c.c. were injected. It is possible that this made some difference.

Dr. Harvey R. Gaylord, Buffalo: After years of trying to find under what conditions we obtain original results, we finally came to the conclusion that there was some factor which we could not repeat. We did not separate the plasma, but used the entire blood. I tried the experiment with dogs, using plasma and serum, and obtained no results. In one instance I obtained results from injecting fluid blood into a tumor of the vagina.

Dr. Peyton Rous, New York: I think that too much emphasis cannot be laid on the question of balance. We may be able to tip the scales in some cases of non-malignant growths, when with malignant tumors, it would be impossible.

Dr. J. W. Vaughan, Detroit: When the tumor is progressing with rapidity, the serum will be of no value. The reason that we do not secure results in the beginning is that it is a transitory and not a permanent sensitization with which we are dealing.

Dr. Richard Weil, New York: Balance is a very indefinite feature, so far as I can judge, and one which should be avoided. The whole blood does not carry protection. It immunizes just as embryo tissue immunizes—actively.

Factors in the Production and Growth of Tumor Metastases

Dr. E. E. Tyzzer, Boston: If massage is performed early, the secondary nodules develop much earlier than is ever observed in the natural development of the tumor. The premetastatic period probably depends on other factors at least as important as active resistants to the tumor's growth. The period may be greatly shortened artificially by the massage of the primary tumors. The influence of active resistance in preventing the growth of tumor emboli is largely hypothetic, and does not account for the premetastatic period; for the presence of it has not been shown early in this period. The production of metastasis depends on the biologic character of the tumor, the duration of its growth, the size of the primary mass, possible peculiar conditions furnished by the tissue's host, and, under artificial conditions, forcible manipulation.

DISCUSSION

Dr. Harvey R. Gaylord, Buffalo: We found that depletion in the blood-supply of the tumor seemed to hasten the growth, and we had the impression that anesthesia did the same.

Dr. Peyton Rous, New York: My attention was called to a case of carcinoma in an animal which had been massaged, and I also tried some experiments by massage on adenocarcinoma rats, with the result that the animals all died. In ours, the massage did not cause the tumor material to go into the blood-stream any more than ordinarily.

Cancer Statistics

Dr. W. F. Wilcox, Ithaca, N. Y.: Statistics have become much confused between cancers and tumors. Cancer is primarily a disease of elderly persons, and the proportion of elderly persons who have this disease is steadily rising. The death-rate from cancer among males, while lower, is shown to be steadily *increasing*. The increase in cancer among insured persons is less rapid than that of the general population. In view of all the statistical evidence I am inclined to hold that the increase of the mortality from cancer is apparent rather than real. I believe further that those who doubt this conclusion and think that most of the increase is real may interpret the evidence as showing that the real increase is slackening, and that, perhaps, in certain limited areas it is already approaching its maximum.

DISCUSSION

Dr. James Ewing, New York: The real question that interests pathologists is not so much the incidence as the relation to the particular forms of cancer. Therefore it seems to me that the statistics will have to be confined to particular types of the disease, in order to get away from the tendency to class all cancer as one kind.

Dr. W. F. Wilcox, Ithaca, N. Y.: Regarding the point just raised, rather strenuous efforts are being made by the registration officials to secure a specification of the part of the body primarily affected by cancer, when a certificate of death from cancer is turned in. In 1900 about 18 per cent. of the death certificates read simply "cancer" and nothing else.

The Effect of Fulguration and Non-Carbohydrate Diet on Transplantable Rat Sarcoma

Dr. S. P. Beebe and Miss Eleanor Van Alstine, New York: The animals were divided into two classes, those in which we started the dieting immediately on the planting of the tumor and those in which the diet was begun at a period prior to the transplantation of the tumor. The results in the first class showed that there is no difference in the behavior of the tumor on the ordinary diet and on the non-carbohydrate diet, when the diet is begun immediately. The results of the second type were important. Twenty-six rats were given this special non-carbohydrate diet, and twenty-six were given a control diet, which was the ordinary diet of the laboratory. The nitrogen remained the same in each case. In the non-carbohydrate diet we replaced lard by lactose. There were 100 per cent. of "takes" of the tumor in transplantation. In the second and third weeks the control animals showed two and a half times the tumor over the animals on the special diet. Between the third and fourth week so many of the animals died that it was not advisable to go on with the investigation.

DISCUSSION

Dr. Fredrick Parker Gay, Berkeley, Cal.: I should like to ask what the relation of the broth was in the second class of diet.

Miss Van Alstine: The broth was about the same up to the time of the first week, when the tumors began to drift apart; and the animals on the lactose diet, in which the tumor grew very fast, began to lose weight.

Dr. S. P. Beebe, New York: The rats, twenty-five or thirty, were planted with the same tumor on the same day. They had been fed with the special diet, and kept under the same conditions; yet if they did not have the carbohydrate food, they did not take the tumor—or if they did, the tumors did not grow so large as in the animals which did have a carbohydrate diet. If you plant the tumor and start the diet on the same day, it has no opportunity to manifest itself, the tumor having killed most of the rats. This short period would, when estimated in proportion to the lifetime of a human being, mean years on this diet, in order to prepare him to resist the tumor.

The Purins and Purin Metabolism of Some Tumors in Domestic Animals

Dr. Esmond R. Long, Chicago: The purins of tumors in domestic animals are generally the same as those of the normal tissue. The purin enzymes are also generally the same in tumors as in the normal tissue from which the tumors are derived. The absence of xanthin oxidase in a malignant tumor, containing otherwise the same purin enzymes as the tissue from which it comes, is evidence, on chemical grounds, confirming the histologic evidence of the embryonic character of tumor tissue.

DISCUSSION

Dr. Richard Weil, New York: The tumors of sheep have long been a subject of dispute. It has been shown that these tumors are not derived from renal or adrenal rests, but are tumors of liver-cell origin.

The Influence of Ultraviolet Light on a Tumor Caused by a Filterable Agent

Dr. Peyton Rous, New York: Three or four years ago we isolated from the tumor of a chicken a filterable agent which, when used under aseptic precautions produced a tumor in other animals. We tried the Roentgen ray and the ultraviolet rays on these tumors. The results with the Roentgen ray were not satisfactory; but with the ultraviolet rays we were able to secure better results. Ordinarily the fresh tumor tissues when transplanted into susceptible fowls caused a decided growth within a week. This was with malignant growths. When we used less malignant growths the tissues died at once and we did not obtain the round-cell reaction. We think that there is a definite and quite distinct resistance to this process directed against the new growth, which prevents the tumor from being infectious. We found some fowls susceptible to the agent and not to the transplanted cells; others susceptible to the transplanted cells, but not to the agent, and still others susceptible to both.

DISCUSSION

Dr. James Ewing, New York: I should like to ask if drying destroys the life of all the cells? I found that active drying of living epithelial cells did not destroy their viability.

Dr. Peyton Rous, New York: I had not been aware of the fact that epithelial tissue would survive drying. From my own findings, and those of others, I judged that they would not.

The Action of Intravenous Injections of Various Substances in Animal and Human Cancer

Dr. Leo Loeb, St. Louis: Of forty-six tumor-mice injected with colloidal copper, thirty-five did not grow and eleven grew. The colloidal condition in which the metal is introduced is of great influence on the results which are obtained. Various caseins inhibited the growth of tumors during the period of injection in the large majority of cases. All cases which are rapidly growing cannot be markedly influenced by the treatment. Possibly a slight retardation of growth can be obtained for some time at least. We may conclude from our observations that mouse carcinoma and human cancer can be affected in a similar manner, and that comparing the dose given per kilogram of animal and man, the copper is not less effective in the case of man than in the case of mice. I am not inclined to think that these various substances act directly on the cancer cells after having been taken into the cell bodies. How far this mode of treatment in combination with others, such as radium and Roentgen rays, may become of practical value, we cannot predict at present.

DISCUSSION

Dr. Thomas Ordway, Boston: We selected four cases: a slowly growing carcinoma of the tongue, a case of rodent ulcer, a case of carcinoma of the tonsil and a case of carcinoma of the neck. In only one of these cases did there seem to be even a temporary improvement. While all the patients are living, yet there has been no definite improvement manifested. Cancers are subject to great fluctuations, and it is very difficult to draw conclusions as to the results of any form of treatment.

Dr. H. Gideon Wells, Chicago: The unique position occupied by casein in these experiments is interesting. Goat and cow casein will counteract one another. In the great incidence of carcinoma in the mammary gland one may see a connection between that and the effect of casein on these carcinomas.

Dr. Richard Weil, New York: We gave copper in amounts from 100 to 700 c.c. In some cases we noted chill and rise of temperature, but in general the copper was well borne. We had a necropsy in one case, and the tumor from operation in another. This gave us two tumors to examine. No trace of copper could be found in either tumor on analysis. In the liver, however, marked amounts were found.

Nematodes in Hyperplastic Thyroids of Dogs

Dr. Harvey R. Gaylord, Buffalo: We found little tubercles in some of the slides made of the thyroids from dogs which had acquired hyperplasia of the thyroid from drinking water from an infected pond. Three puppies which had drunk the pond water directly, without boiling, had tubercles in the capsule of the thyroid, and in some cases in the structure of the thyroid, in the center of which was a small nematode. A control dog that also showed a slight amount of hyperplasia, which might have been acquired before the experiments began, also showed this tubercle containing a nematode.

DISCUSSION

Dr. S. P. Beebe, New York: We have had some ideas in regard to nematodes having a possible relation to the action taking place in the thyroid.

Dr. Peyton Rous, New York: I have found nematodes in normal mice, in sections made of the skin for other purposes, and in chickens they are common in the young.

Dr. Erwin F. Smith, Washington, D. C.: It is well known that there are many free nematodes and many parasitic ones on plants.

Dr. James Ewing, New York: If the nematodes are found frequently without relation to tumors, the histologic evidence is strong that they are connected with histologic reactions.

Dr. H. R. Gaylord: So far as I can tell, there is no relation between the nematodes and the hyperplasia.

Carcinoma of the Skin

Dr. J. A. Fordyce, New York: I have some photographs of Paget's disease showing identical changes and proving that this disease is not limited to the nipple. You can find it in other parts of the skin. I have seen it in the buttocks, thighs and scrotum. The changes in the epidermis were identical in all the cases; but in the nipple skin there was proliferation of the epidermis.

DISCUSSION

Dr. James Ewing, New York: Does Paget's disease in regions not connected with the breast throw any light on the main question at issue, namely, the relation of the skin lesion to primary carcinoma of the breast duct?

Dr. J. A. Fordyce, New York: Paget's disease is a primary disease of the epidermis. The primary changes are seen in the epidermis before there is much involvement of the underlying tissue.

AMERICAN SURGICAL ASSOCIATION

Annual Meeting held in Washington, D. C., May 6-8, 1913

The President, Dr. Charles A. Powers, Denver, in the Chair

Fibromatosis of Stomach and Its Relationship to Ulcer and to Cancer

Drs. Alexis Thomson and James M. Graham, Edinburgh, Scotland: There exists an innocent form of gastric fibromatosis (cirrhosis or linitis). We have observed nine cases in which, neither in the stomach nor in the lymph-nodes, w there a trace of cancer to be found. In the mucosa app ances resembling cancer are met with in these cases might be mistaken for it, but we are confident they represent cancer, for the suspicious appearances are to the mucosa. We have operated in cases of fibro and, having done no more than an exploration, or at palliative gastro-enterostomy, the tumor has disappea the patient his survived ten or more years. Ther essential difference between fibromatosis and the call scar tissue of a gastric ulcer. Scar tissue resembles the tissue that forms in other organs and tissues in its structu in that it is limited in extent and is proportionate in amount to the lesion with which it is associated. Fibromatosis not only differs from scar tissue in its structure and arrangement, but, above all, is characterized by its capacity for spreading in the wall of the stomach, it may be, far beyond the area of its original formation. It may, for example, spread round the whole circumference of the stomach and into the adjacent transverse colon. The scar tissue which attends on ulcer takes the place of the coats of the stomach that have been destroyed by the ulcer; fibromatosis is an addition to the tissues of the stomach, and by its selection of the submucosa, it renders the different coats of the organ more easily recognized than in the normal state.

We do not know what is the cause of gastric fibromatosis; but from its invariable association with a punched-out ulcer or with chronic superficial ulceration of the mucosa, it is suggested that through the breach of surface there enters an irritant or toxin which excites the diffuse formation of fibrous tissue. The clinical evidence supports the inference that if the breach in the mucosa heals, the fibromatosis may disappear. We are unable to support the view that fibromatosis is of syphilitic or tuberculous origin. Fibromatosis does not exclude the presence of cancer. The ulcer or ulceration which is responsible for the occurrence of fibromatosis is also liable to become the starting-point of cancer. We have had five cases in which there is the combination of ulcer, fibromatosis and cancer. Because of the impossibility of excluding cancer at the period of operation, the treatment must necessarily be on the same lines as cancer. The subsequent detailed examination of the specimen, if it exclude cancer, will permit of a favorable prognosis.

DISCUSSION

Dr. Joseph C. Bloodgood, Baltimore: I have seen at operation four cases of this disease. The thing which impressed me most was the fact that in other lesions there is a similar production of connective tissue out of proportion to any known etiologic factor, such as osteitis fibrosa, acne and desmoid tumors. In the four cases which I have observed I was surprised by the absence of adhesions between the peritoneum covering the stomach and the surrounding viscera, and also by the fact that in spite of the enormous increase in connective tissue throughout the wall of the stomach the peritoneal surface remained free.

Dr. Joseph A. Blake, New York: The condition of fibromatosis might be due to a very slight infection giving rise to a rather diffuse round-celled infiltration with marked reaction on the part of the tissue to the irritation. The same condition is apt to obtain in places in which there are broad tissue-planes, as in the neck and abdominal wall.

Dr. T. A. McGraw, Detroit: I wish to cite a case of pyloric obstruction caused by a tumor the size of a hen's egg, the condition being relieved by a gastro-enterostomy with the elastic ligature, the patient living in perfect health for three years. At the end of that time he again developed intestinal obstruction. Operation revealed no adhesions around the stomach, no trace of the original tumor at the pylorus and no palpable lymph-nodes, but a cancer of the large intestine immediately under the stomach though not in any way connected with this viscus. The patient succumbed to the operation, and examination of the sections showed typical scirrhus carcinoma, with cheesy degeneration of the lymph-nodes.

Dr. J. M. T. Finney, Baltimore: I have operated in cases of fibromatosis doing simply an exploration or a palliative gastro-enterostomy, with the recovery of the patient and the disappearance of the tumor. I have seen a case of spontaneous cure without operation.

Dr. Rudolph Matas, New Orleans: Simple diffuse fibromatosis is a very rare condition. In the pathology of elephantiasis, which is a fibromatosis of the subdermal tissues, there are a great many analogies to this diffuse progressive form of fibromatosis encountered in the stomach.

Dr. Arpad G. Gerster, New York: A case of excision of a pyloric tumor was diagnosed as carcinoma. In the removal I found that I had cut through a substance very much resembling malignant tissue, and therefore feared that I had not made a wide enough excision; but on microscopic examination, although the body of the tumor was proved carcinoma, the surrounding material was a simple fibromatosis.

Dr. William B. Coley, New York: In my opinion the clinical signs with regard to these tumors of the pylorus are of more value than the microscopic report if the latter prove negative for malignancy. In a case in point, in which Dr. Mayo operated, the clinical diagnosis was carcinoma, the pathologist failed to find any trace of this condition, and yet the patient died two years later with general carcinomatosis.

Diagnosis and Treatment of Fractures Involving the Knee-Joint (Including Epiphyseal Separation)

Dr. John Bapst Blake, Boston: Since May 24, 1864, 871 closed and 11 open fractures have been treated at the Boston City Hospital, about 2 per cent of all fractures. The etiology is usually indirect violence, and this is probably an explanation of the scarcity of open patella fractures. Obliteration of normal joint dimple is a constant symptom. Of the last 418 cases, since 1895, 245 have been subjected to operation, and 173 treated expectantly: at present practically all cases due to indirect violence are subjected to operation: usually a capsule suture with absorbable material, without drilling the bone. There were 7 cases of refracture, patients operated on being apparently more liable to refracture. There were 8 deaths in 418 cases, most of them due to pneumonia or delirium tremens or both. Open fractures are cleaned with particular care and prolonged irrigation, and closed in a manner similar to the others. There were 20 cases of separation of lower epiphysis of the femur, and but 2 of the upper epiphysis of the tibia since 1864: also 2 cases of Osgood-Schlatter disease. Fractures of the femur or tibia into the joint are often unsuspected even by a good practitioner. They should be considered in every case of trauma near the knee. They seldom require open operation. The former almost invariably have backward displacement of the lower fragment, and will be operated on more frequently in the future; both need longer fixation than shaft fractures. On the whole, the involvment of the largest joint surface of the body, except for the danger of sepsis, makes less difference than might be expected if early diagnosis, Roentgen-ray control and sufficient immobilization be practiced.

DISCUSSION

Dr. Harry M. Sherman, San Francisco: I do not agree with those who hurry the removal of the splint in fractures of joints. Immobilization kept up for time sufficient to get solid union is imperative. Immobilization is not the cause of ankylosis, but trauma of the joint itself does result in this condition because of adhesions. Passive motion which produces pain produces trauma and should be guarded against.

Dr. Charles L. Scudder, Boston: One should be guided as to the time of relieving immobilization and beginning passive motion by the condition of the fragments, whether or not they have been reduced and the articular surface restored to the normal. A longer time is required when there is a large amount of callus, as in incomplete reductions. Immobilization does not cause ankylosis but lack of reduction does.

Dr. George E. Armstrong, Montreal: The functional result in fractures is largely dependent on the anatomic result. There is but a slight tendency on the part of fractures to displacement after being once properly replaced, and while in many cases the use of a foreign body is objectionable, the method of notching the ends of the bones even in spiral or oblique fractures will hold them in accurate position. In two cases I made a dowel from a small portion of the crest of the tibia, inserting this into the medullary canal of the upper and lower fragments of the broken bone. This piece of living bone has done much to stimulate and increase repair.

Dr. Willy Meyer, New York: Fifty years ago William Busch insisted that stiffness would not result if the elbow were placed in three positions: first, in the obtuse position in which the patient usually holds the arm when he presents himself for treatment, for ten days; then with a whiff of anesthetic, conducting the arm slowly to the sharp right-angle position, keeping it there for ten days; finally, with another whiff of anesthetic very slowly bringing it into the straight position with a splint on either side encased in a flannel bandage. I have had most satisfactory results with this treatment.

Dr. Henry B. Delatour, Brooklyn: In the last nine years I have had seventy-eight fractures of the patella, with operation in all, with a mortality of one; this was due to delirium tremens. Two were cases of simultaneous fracture of both patellae. The method of operation employed was suture with chromicized catgut, particular attention being paid to the tear in the ligament. No drainage was used. A plaster splint was applied from the toes to the middle of the thigh for ten days, then the splint was divided to leave a posterior splint, the patella was moved laterally at this dressing when the sutures were removed, and the posterior splint was retained for three weeks; after this time it was removed at night, but kept on in the daytime, thus allowing the patient some passive motion in bed without any strain directly on the patella. No movements of the joint were made by the surgeon until after the fourth week. In only two of the seventy-eight cases did I encounter trouble in securing motion; these two patients gave a previous history of rheumatism, and eventually good motion was obtained. There was subsequent fracture of the opposite patella in four cases, and refracture of the same patella in two cases.

Dr. James E. Moore, Minneapolis: By keeping the injured member quiet long enough to allow Nature to bring about a natural healing in the bone, and by letting the patient exercise it himself afterward, the greatest number of good results will be obtained. It is more important to treat most carefully joints in adults than in children with regard to the after treatment. Great difficulty is sometimes encountered about e knee-joint after fracture of the neck of the femur in rsons and in such cases I employ passive motion to -joint.

arles N. Dowd, New York: The results in bone s in children are much better than in adults, and these results in children are much the same whether treated by the most improved or by the old-fashioned methods. Interference in children is not so necessary as in similar injuries occurring in adults.

Congenital Dislocation of the Hip—A Rational Method of Treatment

Dr. Harry M. Sherman, San Francisco: All the components of the joint, femora, head and neck, acetabulum and capsular ligament, are variants in greater or less degree from the normal, and of these the capsular ligament, elongated and narrowed, is the chief obstacle to easy or complete entrance of the femoral head into the acetabulum, while the twisted femoral shaft, which gives the neck and head a forward direction instead of one inward and but a little forward, is the chief cause of reluxation and the assumption of the position called the anterior transposition. Therefore I practice reposition through an incision. This, placed between the tensor vaginae femoris and the long head of the rectus femoris, cuts only connective tissue in exposing and entering the capsular ligament. Through this incision the narrow part of the capsule is reached and freely cut, and then, in the great majority of cases, in children of proper age, the head can easily be lifted into the acetabulum. Later, to prevent a reluxation, an osteotomy of the femoral shaft is done below the trochanters, and the lower fragment is rotated outward while the upper fragment is held in such a position that the head and neck are properly correlated to the acetabulum as well as to the outward rotated shaft. The method of holding the upper fragment, consisting of head, neck aand trochanters, is by driving into the shaft between the trochanters, a suitable steel nail the end of which projects and can be incorporated in the plaster-of-Paris dressing. The osteotomy is accorded a place of considerable value, for the cases of satisfactory joints, that is, joints that are practically normal functionally, even though they vary from the conventional norm anatomically, was but 41.3 per cent. before the osteotomy became a part of the technic, while 70.3 per cent. of satisfactory joints are secured since the osteotomy is pr in all cases that need it.

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Dr. William S. nore: operated
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ventricle, ¾ inch long, continuous silk suture. Ligation of descending branch of left coronary artery near its origin. Drainage of pericardial and pleural cavities. Pyopericardium and pyothorax. Recovery. Death five years later from pulmonary tuberculosis. At necropsy the wall of the left ventricle was the seat of interstitial myocarditis, and in one place near the apex greatly thinned. Case 2.—Symptoms of acute anemia and hemopneumothorax. Stab wound of left ventricle, ½ inch long. Continuous silk suture. Suture of pericardium, drainage of pleural cavity. Pyothorax. Recovery. Patient still well four years and three months after injury. Case 3.—Symptoms of compression of heart. Pleura not injured. Stab wound of right auricle, ¼ inch long. Continuous catgut suture. Closure of pericardium. Pleura not opened during operation. Recovery without pyopericardium or pyothorax. Patient well after two years. Case 4. Symptoms of acute anemia and hemopneumothorax. Stab wound of left ventricle, 1 inch long. Continuous catgut suture, closure of pericardium, drainage of pleural cavity. Death in forty-one hours. Necropsy, pyothorax, purulent pericarditis, acute infective myocarditis, acute vegetative endocarditis. Case 5.—Symptoms of acute anemia and hemopneumothorax. Stab wound of right ventricle, 1 1/5 inches long. Continuous catgut suture. Closure of pericardium, drainage of pleural cavity. Death in one hour. Autopsy, wound passed into right ventricle, then through the septum into the left ventricle. Both ventricles were hypertrophied and the mitral valves were badly diseased.

Surgery of the Pulmonary Artery

Dr. Willy Meyer, New York: The main trunk of the pulmonary artery is easily accessible within the pericardium after incision of the latter and pulling the pulmonary artery plus ascending aorta forward by means of an elastic tube, which is conducted through the transverse sinus of the pericardium. The elastic tube compressing both vessels is held by an assistant, the pulmonary artery is incised, and the emboli are removed with forceps. The vessel wound is then closed by sutures. Trendelenburg and his assistants have done the operation twelve times. No permanent recovery has been seen so far, but the results are encouraging. One patient of Krueger lived four days after the operation and then died of pleuropneumonia. The two arteries cannot be compressed longer than forty-five seconds. Laewen and Sievers of the Leipsic clinic have found that the compression of the two venae cavae is better borne, evidently on account of avoiding the distention of the right heart. In doing this, six or eight minutes are at the operator's disposal. The ligation branches of the pulmonary arteries for bronchiectasis recommended by Sauerbruch and Bruns two years ago. patients operated on by me are greatly improved so far interruption of the physiologic function of the lobe lung poduces shrinkage, connective tissue formation, and sion between pulmonary and costal pleurae. Multiple re of ribs done at a second stage produces collapse of th later on. The main trunk of the left and right puln arteries can be ligated without harm in the animal. Tl branch is nicely accessible within the pericardium by refle a part of the latter or right outside of the pericardium, acco ing to anatomic conditions. Ligation of the right branc is more difficult. The best procedure is the exposure and ligation of the right pulmonary artery within the pericardium between the ascending aorta and the superior vena cava. Another approach is to the division of the right pulmonary artery through an incision outside of the vena cava superior. The experimental work on the latter approach has not yet ompleted. If it should be shown that pulmonary e and collapse therapy of the lung do not cure or at atly improve the trouble, pneumectomy will become tion of choice, since we have learned to close the r-tight.

Anastomosis for Threatened Gangrene of the Foot

Freeman, Denver: From the theoretical con- from the results so far obtained in arteriovenous anastomosis for threatened gangrene of the extremities, the following conclusions may be drawn: Although the procedure is justifiable in a few well-selected cases, it seldom has been followed by success, and even then its real value may be questioned owing to the fact that spontaneous recoveries occasionally occur—with as much frequency, perhaps, as do operative successes. Owing to the uncertainty of the value of the operation, one should at least endeavor to do as little harm as possible. Hence, from this point of view, it is better to do a side-to-side anastomosis, or to implant the distal end of the vein into the side of the artery, rather than to unite the two vessels end to end, thus preserving to the limb its remaining arterial circulation, however little that may be. According to our present knowledge, operations on the upper extremities should be considered with reservation, owing to the comparative frequency of spontaneous recoveries.

Discussion on Suture of the Heart, Surgery of Pulmonary Artery and Arteriovenous Anastomosis

Dr. F. B. Lund, Boston: I wish to call attention to the value of the Meltzer-Auer intratracheal insufflation apparatus in surgery of the cardiovascular system or when the pleura is to be opened widely and when there are no adhesions of the lung to the chest wall.

Dr. Howard Lilienthal, New York: In arteriovenous anastomoses the technic is of prime importance, and it is most important to use the very finest needles than can be handled, No. 13 or No. 14, together with 6 O silk well coated with petrolatum. The end-to-end suture is the best as it affords the minimum chance of thrombosis.

Mr. Alexis Thomson, Edinburgh, Scotland: I had a case in which an arteriovenous anastomosis was done first on one side, and at a subsequent time on the opposite side for threatened gangrene, the anastomoses being of the femoral artery and vein at the apices of Scarpa's triangle. This patient still later developed a hemiplegia and at her own request the common carotid was anastomosed with the internal jugular vein.

Periosteal Round-Cell Sarcoma of Femur with Extensive Multiple Metastasis: Cured with the Mixed Toxins; Epithelial Tumor Developing at Site of Roentgen-Ray Dermatitis Ten and One-Half Years Later; Amputation; Metastasis; Death in Four Months

Dr. William B. Coley, New York: I had a case of periosteal round-cell sarcoma of the femur, involving two-thirds of the shaft, with extensive multiple metastases, apparently cured by the mixed toxins of erysipelas and *Bacillus prodigiosus*, in which ten years later a malignant tumor—sarcoma and epithelioma—developed in the thigh at the site of an old Roentgen-ray dermatitis. The case is unique in being the only one on record of periosteal round-cell sarcoma of the femur with metastases cured by any method of treatment. In February, 1902, the involvement of the femur was so great (two-thirds of the shaft) that hip-joint amputation was strongly advised, but refused. An exploratory operation was done and the diagnosis of round-cell sarcoma confirmed by microscopic examination. The Roentgen rays were used for a number of months to the point of causing a severe dermatitis. While the Roentgen-ray treatment was being given, a large metastatic tumor developed in the left pectoral region, and a larger tumor, the size of a child's head in the iliolumbar region. The growth in the pectoral region was partially removed and a number of Roentgen-ray treatments applied to the locality. No rays were used for the large iliolumbar tumor. The mixed toxins were begun Feb. 12, 1913, and continued until July 25, eighty-six injections in all, ranging in doses from 1 to 20 minims. At the end of two months the hard tumor began fluctuating. An incision was made posteriorly through the ilium, and upward of a pint of broken-down necrotic tumor material was evacuated. The patient made a complete recovery, except for the dermatitis of the thigh, which persisted during the following ten years.

In May, 1912, a small epithelioma developed at the site of the slight dermatitis in the pectoral region. In October the dermatitis of the thigh, caused by the Roentgen ray, underwent extensive malignant degeneration; the tumor grew with great rapidity. An exploratory operation was done Nov. 27, 1912, and the tissue removed was examined by William H. Welch, James Ewing and William C. Clark. The specimen examined by Welch proved to be round-cell sarcoma; the edge of the specimen showed a structure which resembled a true epitheliomatous growth superimposed on the sarcoma. Ewing's specimen showed spindle-cell sarcoma, Clark's showed epithelioma of the basal-cell type. The patient grew worse rapidly, and on Jan. 2, 1913, finally consented to amputation, which had been advised as soon as the diagnosis was made. At this time he was extremely emaciated; the blood-count showed 35 per cent. hemoglobin, but despite his weakened condition he stood the amputation well. Death ensued two weeks later, apparently from general metastases. A careful study of the entire specimen showed two distinct types of tumor side by side, one a typical epithelioma, the other a sarcoma. Section of the bone showed in the medullary cavity of the femur, a short distance above the condyle, a circumscribed tumor measuring 5 by 3 cm. Microscopic examination showed this tumor to be a squamous-cell epithelioma, interpreted by both Welch and Ewing as a metastasis from the lesion in the skin or muscle. Inasmuch as the former periosteal tumor did not involve the muscle and the later tumor did not involve the bone or periosteum, I believed that the later tumor development was entirely independent of the primary growth of ten years previously. This was also the opinion of Welch and Ewing, who thought that the sarcomatous tumor might possibly be regarded as a relighting of the old bone sarcoma of ten years ago, some of the cells of the former tumor having remained latent during this long period.

DISCUSSION

Dr. A. J. Ochsner, Chicago: I had a case of inoperable round-cell sarcoma of the ilium which was opened, the diagnosis made and confirmed, and the patient treated by the Coley toxins with apparent recovery. Two years later a new tumor appeared in the same region and increased rapidly in size. Toxins again were administered, but without effect, the patient succumbing to the condition. Necropsy revealed the fact that the secondary tumor was not a sarcoma but a cyst, at the bottom of which was a carcinomatous degeneration.

Dr. Joseph C. Bloodgood, Baltimore: In reference to the supposition that the secondary growth might have resulted from the Roentgen-ray treatment, I had a patient seven year after a primary and two secondary growths operated on and treated by the Roentgen ray. I am of the opinion, however, that the result obtained by Dr. Coley of disappearance of the tumor and an interval of ten years before reappearance, justifies in inoperable cases the trial of the mixed toxins.

Hygroma Cysticum Colli

Dr. Charles N. Dowd, New York: Large cystic tumors in children's necks have been described for years under the name of "hygroma." The term should be restricted to cysts lined with endothelium and having a marked power of growth. Such cystic growths are uncommon. A careful search of the literature has so far revealed records of only ninety-one cases located distinctly in the neck, and thirty-five cases located principally in the axilla, but in part, at least, extending there from the neck. In the great majority of these cases there is no definite report of the cyst lining; hence this detail of their structure is unknown. I have seen three cases of undoubted hygroma, and a fourth case which was believed to be a hygroma but in which inflammation had destroyed the finer structure of the cyst walls. Two of these cysts showed a very strong form of growth—one extended into the mediastinum and another under the clavicle and onto the anterior chest wall beneath the pectoralis major muscle which it pushed forward. One recurred rapidly. Protargol staining of the fresh cyst walls in two of the cases showed delicate e thelial linings. Microscopic section of the third showed what was believed to be endothelial lining. The lining of the fourth case was obliterated by inflammation. All cases were treated by excision. One patient died in the hospital, another died of intercurrent disease a few weeks after leaving the hospital. I believe that these cysts are due to embryonic sequestrations of lymphatic tissue which at a later time shows the power of very vigorous but irregular growth.

DISCUSSION

DR. JOHN B. MURPHY, Chicago: If only a portion of the tumor is removed there is a rapid return with enormous increase in size and secretion, and these tumors frequently undergo malignant degeneration.

DR. JOSEPH C. BLOODGOOD, Baltimore: I have encountered a number of cysts in the neck lined with endothelium, having no apparent connection with the blood-system, and I have also seen them in the axilla and groin, occurring without trauma. Three of these cases, which in all number less than twenty, have been malignant, evidenced by the presence of blood and papillomatous growths of the cyst wall, these papillomas making excision extremely difficult if not impossible. I advise early removal of hygromas to avoid malignancy, which seems to be a late development.

(To be continued)

Miscellany

Hyperthyroidism.—Bing protests against the use of the name exophthalmic goiter, saying that the goiter and the exophthalmos are the least essentially characteristic symptoms. The cardiovascular anomalies and the tremor are the obligatory diagnostic criteria and not the protruding eyes or the goiter. The syndrome may be typical even without the latter. The tachycardia is permanent, the heart beat is regular as a rule. The tremor is rapid, eight or ten times a second, and increasing in intensity during movements and subsiding in complete repose. Other secondary symptoms are transient weakness of muscles, generally those of the legs, amounting at times to paroxysmal paraparesis, so that the patient sinks down as he is standing or walking. This muscular weakness fluctuates and it may occasionally be experienced elsewhere than in the legs, in the back of the neck or external ocular muscles, while the accommodation musculature and the iris are spared. Some of his patients were unable to draw a deep breath; the French call this the "signe de Louise Bryson." Other secondary symptoms are menstrual disturbances, especially dysmenorrhea and less frequently amenorrhea. Diarrhea is also characteristic; it comes on suddenly and may persist for days or weeks, rebellious to all treatment, and then stop suddenly as it began. The passages are very thin; there is seldom pain with them and they may run up to ten or more a day. General or localized hyperidrosis is also common, continuous or paroxysmal. This dampness of the skin is probably responsible for its changed conductibility. If in health the conductibility corresponded to 4,000 ohms, in the thyroid patient it drops to 1,000 ohms. Neuralgic disturbances and signs of excessive excitability of the neuromuscular apparatus are more common. A slight tap on the muscles starts them to twitching. Trophic disturbances are likewise common in exophthalmic goiter, especially dryness and brittleness of the hair and a lack of luster; this was noted in 60 per cent. of Bing's patients. Pigmentation, edema, softening of the bones and atrophy of the breasts are also common. In his study, published in the *Schweizerische Rundschau für Medizin*, 1913, xiii, 409, he reviews the anomalies in the metabolism, the lymphocytosis, and then comments on the extreme restlessness of the patients, their constant activity and the lack of perseverance in their efforts. It is hard for them to stay long in one place, they are subject to frequent change of moods, and they take offense readily. In two-thirds of all his cases, symptoms on the part of the heart were the first to attract attention, before a goiter or tremor was noticed. The course is generally subchronic or intermittent chronic, but Trousseau and Müller have reported a rapidly fatal course with death in two months in a few cases, and Mackenzie a death the third day after the first symptoms. A hereditary and familial connection with psychoses or psychoneuroses can be traced in most cases, and preceding or coexisting mental disease is not very rare. The hyperthyroid syndrome sometimes develops as a complication of organic disease of the nervous system or following a fright or emotional stress. In treatment Bing advises a few weeks in bed to reduce the restlessness and tachycardia, avoidance of meat and much seasoning, and also of tea, coffee, alcohol and tobacco, restricting the diet to eggs, milk and vegetables. If milk increases the diarrhea, he orders it in the form of a jelly (10 gm. of pulverized gum arabic are stirred into a little cold milk and then 0.25 liter of whole milk is poured over it and the whole boiled, with or without a little peeled and ground sweet and bitter almonds). Resting in a steamer chair out-of-doors, especially at a moderate altitude, from 3,600 to 5,400 feet, is useful, but sports and dancing must be forbidden. Of drugs, sodium phosphate in daily doses of 6, 8 or 10 gm., dissolved in water, milk or soup, seems to have almost a specific action, Bing says, on most of the hyperthyroid symptoms. If it induces diarrhea, he gives calcium glycerophosphate instead (0.25 gm. four times a day). Valerian preparations do little good unless they are given continuously and in large doses, almost to actual saturation of the system with valerian. Belladonna and atropin have occasionally had a favorable action, as also arsenic. Organotherapy has not obtained a permanent place yet in treatment of hyperthyroidism, although theoretically it is well founded; in its very nature, however, its action is but temporary. He says that operative treatment also is liable to have but transient success, requiring further resections. The mortality also is about 5 per cent. on account of the unstable condition of the heart and vasomotors. Bircher advises against operations in exophthalmic goiter, but Bing advocates them when the social or financial condition renders impossible proper medical supervision over months and years.

Fatalities after Salvarsan.—The April number of the *Berliner Klinik* is devoted to a survey of the fatalities following administration of salvarsan. The list includes a personal case reported by the author, J. Schestopal of Odessa. His patient was a girl of 11 with parenchymatous keratitis from inherited syphilis. After a vigorous course of mercurial treatment vision improved and the general health was good, but the Wassermann reaction was still strongly positive. *Fifty-fo* inunctions had been made in sixty-nine days, but the per ing Wassermann reaction showed that the causal germ resistant to mercury and he changed to neosalvarsan, an intravenous injection of 0.4 gm. neosalvarsan (corre ing to a dose of 0.266 of salvarsan). Fifteen minute the child developed slight and transient nausea, chillin headache, but she felt so well by evening that she w a moving-picture show. Three days later a second in was given of 0.75 gm. neosalvarsan (equal to 0.5 gm. sa san) likewise in the median cephalic vein. The bowels fa to move for three days; nausea and headache developed, fo lowed by a sudden onset of symptoms of an acute affection of the brain, and the child died within twenty-four hours. The necropsy findings were negative, nothing pathologic being found except a slight tendency to fatty degeneration of the liver. The features of the case also exclude anaphylaxis, and they did not correspond to the picture of arsenic poisoning. Schestopal groups the case with the fatalities reported by Kannengiesser, Rissom, Westphal, Almquist and others in which the internal organs were comparatively sound and there were no hemorrhages in the brain cortex, and the severe brain and spinal-cord symptoms can be explained most plausibly by Ravaut's "cerebrospinal reaction," evidenced by the appearance of albumin and lymphocytosis in the cerebrospinal fluid. Ravaut found this cerebral reaction in the secondary stage of syphilis; but in Schestopal's case the disease was of the hereditary type. (Ravaut's article was summarized in THE JOURNAL April 13, 1912, p. 1156.)

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THE AUSCULTATORY DETERMINATION OF EARLY PATHOLOGIC CHANGES IN THE LUNGS*

HENRY SEWALL, M.D.
Professor of Medicine in the University of Colorado
DENVER

It is with the conscious risk of a charge of unwarranted temerity that I venture to invite you to reenter a field of physical diagnosis in which each one has long delved as a master. My only excuse is that after twenty-odd years of special personal study of the subject the procedure of auscultatory examination became, of a sudden, fraught with a coveted wealth of information concerning early recognition of intrathoracic disorders wholly due to a new point of view for the application of an old method.

The clinical results thus obtained suggest the experience of the farmer whose twenty bushels to the acre under the tillage of his ancestors has increased a hundred per cent. with the application of a new line of thought to his labor. I am the more encouraged to believe that my personal sense of enlightenment, derived through the procedure to be described, is founded on objective facts because of experience with several patients who presented themselves shortly after having secured from real medical experts a report of perfect physical condition. That these patients were actually afflicted with pulmonary tuberculosis at the time mentioned was proved by recent positive sputa findings. The study of the thoracic acoustics in these cases clearly bespoke pathologic organic changes in the lungs, conditions which were amply verified on the skiagraphic plate.

Physical diagnosis demands different faculties and technics according as the organic changes, whose existence it is its object to establish, are well advanced or only in their incipiency. The adept who is able to announce the presence of a lobar pneumonia hours or even days before the development of the classic signs of the disease has cultivated art and imagination as they are not expounded in the text-books.

The natural history of pulmonary tuberculosis, involving as it does gradual alteration by insensible steps of the normal structure, size and elasticity of the thoracic viscera, would seem to imply that we can never hope to determine by physical means the very advent of the disorder. If our physical examination reveals lesions which can be definitely ascribed to tuberculosis, the patient is already far advanced on a course which, if not interrupted, will lead to a fatal termination. But there is a prologue to this pathologic history in which the plot of the story is foreshadowed by allusion and innuendo. By fortunate chance the alert critic of the prologue can, as at a rehearsal, completely change the finale of the contemplated play.

The earlier the stage at which we seek to determine morbid changes in the lungs the more important becomes the conscious appreciation of the physical signs which characterize the normal organs. This truism may be archaic; I venture to assert, nevertheless, that much of value lies still undetermined in the specific topographic distribution of the physiologic and pathologic physical signs of the chest. There is, for example, an assumed predilection of tuberculosis for the apices of the lungs. The lower half of the left lung has long been to me a wonder area. Why, for example, do we so often find in tuberculosis a soggy, airless left base which one is tempted to aspirate for a suspected effusion? Why, in tuberculosis, is the pulmonary tissue at the base and on the left border of the heart so apt suddenly to develop signs of consolidation which in the course of a few days abruptly clear up with a tympanitic note and evidence of cavity formation? It may be suspected that the topographic relations of the left auricle and of the pulmonary artery have much to do with the mechanics of the lower lobe of the left lung. Roentgen-ray studies of the chest show extraordinary variations in the prominence of those structures.

The work of Krœnig, Goldscheider and others has of late years taught us that a peculiarly light percussion of the apices of the lungs is capable of disclosing the presence of a morbid pulmonary condition which could not be recognized by ordinary means.

It should be pointed out, perhaps, that a percussion dulness elicited in this way does not imply a deposit of such magnitude as to give the impression of a dull mass itself, but rather that the disease has altered the resonance of the lung, irrespective of the amount of deposit, so that its vibration response to percussion shall be characteristically altered. The advocates of this light percussion method specifically limit its usefulness to the apices of the lungs. Although of undeniable value, the method seems to me to involve unduly the personal equation of the examiner, and it demands for its employment mechanical skill of unusual degree. The results of such percussion, moreover, must depend in large measure on the amount and distribution of solid tissue outside the thorax on the two shoulders; bilateral differences in muscular rigidity may also, possibly, play a part.

My own study has led me to the belief that through auscultation of the voice and whisper we have an unrivaled means for the detection of minute tissue changes throughout the pulmonary region.

There is a close analogy between the conditions determining the acoustic properties of the chest and those on which the acoustic features of a music hall depend. The details of structure in such a chamber vitally affecting its relations to sound have a minuteness that eludes calculation. We are safe in assuming that every change in the elasticity of the lungs and bronchial tubes, every deposit in contact with the vibrating air-columns, every abnormal congestion of the pulmonary parenchyma, must alter the natural resonance of the lungs and be capable of detection by the ear.

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* Read before the American Climatological Association May, 1913.

These are the conditions which signalize pathologic changes in the lungs apart from and preliminary to those adventitious signs known as râles. It is understood that adequate auscultation of the lungs involves a consideration of the findings from other methods of physical examination, especially the vocal fremitus and percussion resonance. Although the gradations in intensity, quality and distribution of the signs vary considerably among healthy subjects, there is, nevertheless, a fairly definite standard of the normal, departure from which is pretty sure to have a physical basis in disease.

In brief, it may be stated that, as pointed out by Fetterolf[1] and others, the more marked tactile fremitus and vocal resonance distinguishing the right from the left apex of the normal lungs depends on the immediate contiguity of the former structure with the resounding trachea, whose vibrations are thus transmitted transversely through the pulmonary tissue. Any infiltration of this tissue which improves its conducting or resonating properties must amplify and extend the sounds heard in auscultation.

Since it is very common, as shown on the Roentgen-ray plate, for the trachea to incline to the right of the middle line in its course through the chest, normal bronchophony at the right apex is variable in extent and intensity. It should, however, fade gradually from the vertebral column outward, posteriorly, and diminish rapidly below the spine of the scapula. The voice should not linger with an amphoric echo of heightened pitch, especially under pressure of the stethoscope. The whisper is, perhaps, normally confined to the inner third of the right apex laterally, and is limited by the inner lower border of the spine of the scapula below. At the left apex these acoustic characters are more limited in extent and tend to be confined to the upper inner segment of the lung. In the front of the chest the same general statements as to sound distribution hold good; normal bronchophony and whisper are most distinct at about the inner halves of the first interspaces, fading thence outward and downward, more rapidly on the left. The normal distribution of vocal fremitus as determined by touch shows the vibrations to be more or less strong at the inner right apex—fading gradually in a lateral direction, and but little marked or absent at the left apex. At the pulmonary bases the fremitus when present is nearly equal on the two sides, possibly slightly more intense on the left. Fremitus is significant of vibration of the chest wall itself, and it gives rise to a powerful resonant note under auscultation. This voicing of the chest wall proper is due to sympathetic vibrations which reinforce especially the lower or "chest tones" of the larynx.

In 1890, assisted by Miss Pollard, I demonstrated that the fundamental tone of the chest wall could be altered to a certain extent by changing the respiratory phase and tension of the thorax.[2] In fact, the vocal artist actually alters the vibration rate of the great thoracic resonator in a way to best reinforce the various notes of the musical scale. But as a whole, and under ordinary conditions, the fundamental tone of the chest wall is low in pitch and the structure is thrown into sympathetic vibration most readily by the lower or "chest" tones of the register. The importance of distinguishing these intrinsically mural from the purely visceral vibrations appealed to me many years ago, and I was able to show that the sympathetic vibrations of the chest wall itself could be essentially damped by the simple procedure of applying firm pressure to the bell of the stethoscope in contact with the skin.[3] For successful observations of this sort it is indispensable to use a purely air-conducting binaural stethoscope the chest-piece of which shall be thick and heavy and not provided with a vibratile disk.

To appreciate fully the influence of this stethoscopic pressure and the part played by mural vibrations in vocalization one should, at the outset, auscultate both with and without pressure the base of a lung during the voicing of a "chest note." The voice heard under stethoscopic pressure loses much of its "resonance" and intensity and rises in pitch. As pointed out in another place,[4] the high "head notes" do not especially invoke mural vibrations and hence are little altered by stethoscopic pressure. The mural vibrations being dampened, the ear perceives the laryngeal sounds only as transmitted and reenforced by the thoracic viscera. Any modification of the acoustic properties of the internal tissues may be detected by alteration of the normal sound.

Two kinds of sound are made use of in auscultation, namely, the voice and the whisper. The former is essentially a musical note due to periodic vibrations of the vocal cords and is prone to set up sympathetic vibrations in all elastic bodies impressed by it. The latter is "noise" or sound produced by non-periodic vibrations of several structures including, probably, the false cords and the soft palate. Non-periodic vibrations are ill calculated to induce sympathetic resonance. Accordingly, we should not expect to find whispered sound reinforced by sympathetic tissue vibration; it is heard only as conducted from the site of its production. Thus, a superficial excavation in the lung may be accurately outlined through the whispered sound, but the "cavernous voice" tends to spread beyond the limits of the cavity. On auscultating over the manubrium sterni whispered sound is heard with greater or less intensity. When such sound persists under firm pressure with the stethoscope, I am convinced that we have demonstrated an abnormal mass of conducting tissue, vascular or lymphatic, conveying the vibrations of the underlying trachea directly to the surface.

It was an important observation of Manges that a distinguishing mark of whispered sound is its lack of transmission.[5] This is a way of expressing the fact that whisper is incapable of exciting vibrations in the chest wall when the normal lung is interposed between the internal site of vibration and the surface. Normal lung tissue is an excellent "silencer" of sound. Air channels, penetrating stiff, sclerosed tissue are admirably adapted to transmit the vibrations of whisper. The morbid changes which are prone to involve the roots of the lungs even in early pulmonary tuberculosis—the fibrous infiltration and enlargement of the lymph-nodes in immediate contiguity with the back wall of the chest at about the level of the scapular spines—offer a rational explanation of the characteristic transmission of the whisper to this area.

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[1] Fetterolf, George: The Anatomic Explanation of the Greater Amount of Vocal Fremitus and Vocal Resonance Normally Found at the Apex of the Right Lung, Arch. Int. Med., February, 1909, p. 23.

[2] Sewall, H., and Pollard, M. E.: Jour. Physiol., 1890, xi, 159.

[3] Sewall, H.: New York Med. Jour., 1897, lxvi, 758.

[4] Sewall, H.: Am. Jour. Med. Sc., 1913, cxlv, 234.

[5] Manges: Arch. Diagnosis, 1912, v, 209.

A. d'Espine has long contended that bronchial adenopathy in the child can be readily detected through auscultation.

> The special sign which permits us to diagnose the condition at an early period is based on the auscultation of the changes in the voice sounds at the level of the seventh cervical or first dorsal vertebrae. . . . The sign is most obvious when one makes the child speak or count in a low voice. The voice is then accompanied by an added whispering sound localized to one or two vertebrae, or possibly extending to the fourth or fifth.[6]

B. Zabel indorses this method as superior to all others for the early recognition of bronchial adenopathy and points out, as did d'Espine, that when the diagnosis is uncertain by means of the voice it may be established through use of the whisper.[7]

It is common in acute pulmonary affections, as of lobar pneumonia or influenza, to find sharply circumscribed areas of transmitted whisper in the lower parts of the chest. Such an auscultatory condition may occur with none of the percussion dulness denoting consolidation. I can think of no reasonable explanation of the fact except it signifies intense hyperemia of the lung tissue through which its acoustic properties have been modified. The Roentgen-ray plates of such chests made for me by Dr. S. B. Childs have all presented in the area in question a uniform haze such as might be produced by a thin sheet of effusion, though there could be no suspicion of such an occurrence. Hyperemia of the pulmonary capillaries seems to be the most reasonable explanation of the finding.

A careful study of certain labile cases of chronic pulmonary tuberculosis will disclose now and then, especially after undue physical exertion or at the outset of a "cold," new areas of whisper transmission over one or the other lower lobe of the lungs. If the patient is kept at rest the whisper transmission in these areas gradually fails, and coincidently there occurs a clinical improvement in the patient's condition. Indeed, I have been led to combine all these facts in a working generalization, namely, that the earliest morbid signs of pulmonary infection are due to more or less localized hyperemias, which if sufficiently intense and near the surface may be recognized by transmission of whispered sound; but in any case, as will be noted below, may be manifested by an alteration in the normal vocal resonance. The prognostic importance of such hyperemia itself is probably wholly good for it is presumably a salutary reaction against toxic invasion; and the therapeutic indication is mandatory; it is absolute physical and mental rest.

The relatively acute pathologic condition referred to above is, of course, not to be confused with that more chronic state, having nearly identical auscultatory signs, in which there is evidence of pneumonic consolidation or fibroid infiltration.

Turning now to the auscultation of the voice we find, as should be expected on theoretical grounds, that it is marvelously capable of registering modifications in the acoustic properties of the thoracic viscera. When mural vibrations are damped by stethoscopic pressure we are in a position to apprehend the changes in the internal organs. In general, it may be said that with intense congestion of the lungs or such tissue changes as occur in early pulmonary tuberculosis, the voice takes on a more or less amphoric or tracheal character and it tends to become more distinct, prolonged, raised in pitch and nearer the ear with pressure on the stethoscope. When the patient counts "one, two, three," there is a tendency for the voice to linger with a bleating echo which is exaggerated by stethoscopic pressure.

Judgment and practice on the part of the examiner are essential to enable him to discriminate between the widely diffused ringing bronchophony transmitted by air-tubes traversing a somewhat hyperemic but normal lung, as shown by the skiagram, and those similar but differently distributed signs of incipient pulmonary pathologic change. Deductions from the results of so delicate a method as that under discussion must needs be guided by careful reasoning for the right interpretation of the facts it discloses. Nevertheless, as pointed out before, any one fit to carry on a physical examination can with a little application familiarize himself with the normal voice sounds and their distribution with and without pressure of an appropriate form of stethoscope and thus be in a position to detect changes in the pulmonary and bronchial apparatus which elude all other methods of examination.

Roentgen-ray pictures of the lungs may prove of the highest value either in reassuring one as to the absence of suspected trouble or in giving warning of a low ratio of vital resistance to infection virulence. For example, a patient who was thought to have probably recovered from a bilateral pulmonary tuberculosis came for examination after an absence of some months. There was now so marked an exaggeration, with amphoric tone, of voice and so plainly a whisper in the upper chest that the possibility of rapid excavation had to be considered. A Roentgen-ray plate, however, gave complete reassurance for it showed the lungs in good condition but plentifully marked with evidences of sclerotic healing — a tissue change which tends to exaggerate visceral vibrations and render the sound amphoric.

I should like once more to voice specifically the opinion that skiagraphic examination of the chest, through the photographic negative, has already become an indispensable adjunct to the more familiar procedures of physical diagnosis. Prognosis and therapy in early stages of tuberculosis find, in my experience, extraordinary illumination under the Roentgen ray. In "good" cases the skiagraphic evidences of scar tissue, opaque scattered flakes and strands, and calcification of lymph-nodes, are apt to be profuse even in the absence of ordinary morbid physical and clinical signs. In "bad" cases there may be softly mottled or "mossy" areas indicating infiltration without sharp shadows of fibroid tissue or calcification of lymph-nodes. Clinical experience with such subjects has shown me that they are exceedingly liable to retrograde with the slightest hygienic dereliction—the rest cure seems specifically necessary for them.

Briefly summing up the evidences that have been presented we may conclude: (1) that auscultation is capable of giving the earliest objective information of physical changes in the lungs; (2) that such study demands analysis of the sound into those vibrations due to resonance of the viscera and those of the chest wall, and that the latter vibrations can be damped by pressure of an appropriate form of stethoscope; (3) that vibrations transmitting the whisper are confined almost wholly to the viscera; (4) that the modification of the voice sounds by which their quality becomes more amphoric and their duration prolonged into an echo are the striking characters which when accentuated by stethoscopic pressure indicate pathologic changes in the viscera; (5) that the character and distribution of vocal signs over the normal chest are sufficiently constant so that a topographic study of the chest by auscultation may definitely suggest, through recognition of departures from the normal, the intensity and distribution of morbid changes within the lungs, even when these changes are too slight to appeal to the senses through any other method.

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[6] d'Espine, A.: The Early Diagnosis of Bronchial Adenopathy in the Child, Brit. Med. Jour., 1910, ii, 1136.

[7] Zabel, B.: Bronchialdrüsendiagnostik, München. med. Wchnschr., 1912, lix, 2664.

1360 Vine Street.

OSTEOMYELITIS WITH BONE TRANSPLANTATION *

FRANK A. HAMILTON, M.D.
BOSTON

C. R., a French boy, 12 years old, living in Cambridge, was seen in consultation with Dr. H. C. Hache, Somerville, Mass. The patient had been sick for eleven days and had been seen by other physicians. Two months before he had received a cut in the right foot while skating, which had healed. Some days previous to our visit he had been skating and came home with wet feet; then was suddenly seized with intense pain about the right ankle. Swelling rapidly followed and extended to the knee. Pain was excessive, requiring morphin. Vomiting with repeated chills followed.

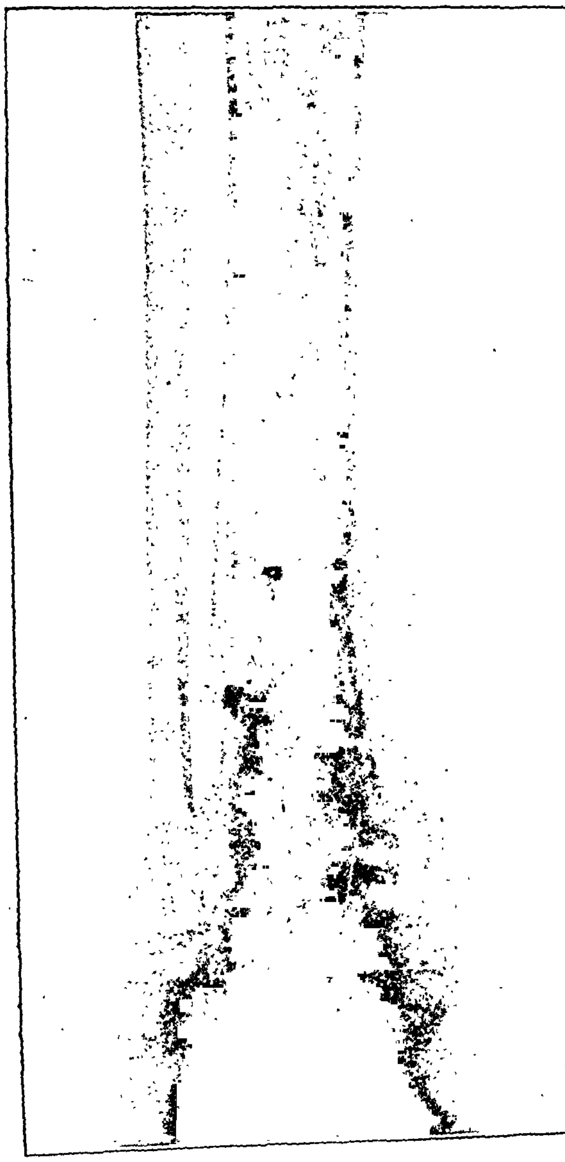

Fig. 1.—Lower part of tibia, 4 inches necrotic with involvement of lower epiphysis. This and the following roentgenograms were taken by Dr. George.

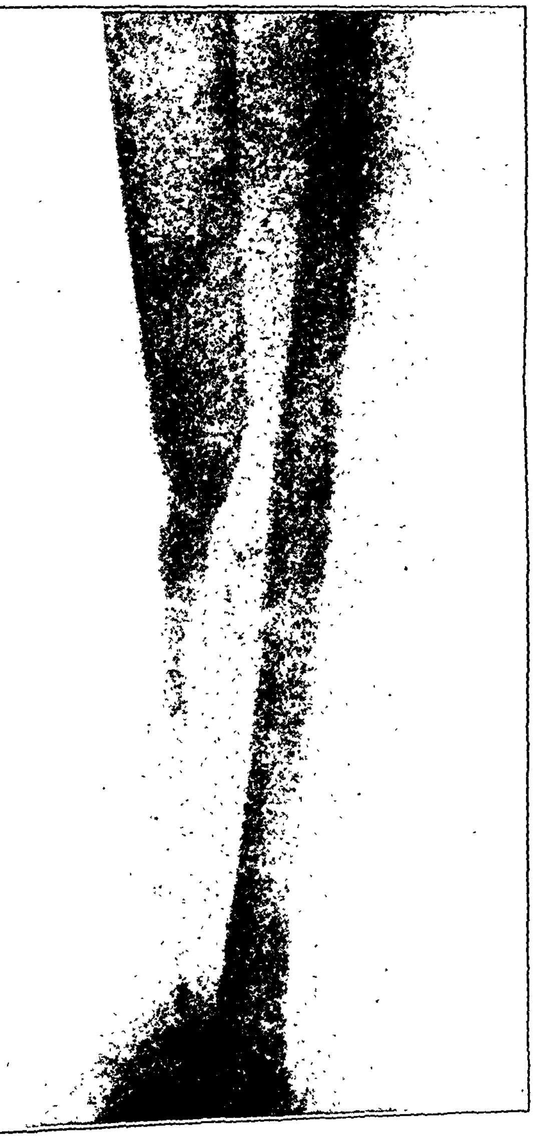

Fig. 2.—Attempt at regeneration of bone, 3 inches having formed at lower end of upper fragment of tibia.

Examination.—Patient showed signs of septic absorption on Feb. 1, 1911, and appeared listless until leg was handled, then would cry out with pain. Right leg, which was swollen from ankle to knee, was held in a semiflexed position; was edematous and painful. Skin was red and had glazed appearance, especially over the greatest swelling, which was about the ankle. There was marked fluctuation in the vicinity of internal malleolus. A few lymph-nodes in right groin were swollen. Slight tapping on heel caused great pain. Diagnosis of acute osteomyelitis was made. Advised ether operation but it was not permitted until the next day, February 2.

First Operation.—An incision 4 inches long was made over the lower fourth of the tibia down to the bone. About a cupful of green pus was immediately set free. Another incision was made internal to the external malleolus two inches long just through the skin. Multiple small incisions were made through the skin for free drainage. The first incision revealed an area of tibia not covered with periosteum just above the epiphyseal line. In the center of this space was a minute opening in the cortex of the bone the size of a pinhead, through which pus was exuding. Periosteum was peeled back and the cortex chiseled for an area 2 inches long and ½ inch in width. Cortex was thickened, dense and very hard. Pus seemed to well up into wound from ankle-joint. Immediate improvement in general condition followed operation, and all pain, which before operation was described by patient as agonizing, had vanished. Bone-marrow was not disturbed. Wounds were packed with iodoform gauze, dressed every day and drained freely for eight weeks.

Six weeks after operation, March 14, 1911, the first roentgenogram (Fig. 1) showed fully 4 inches of lower part of tibia necrotic with slight involvement of lower epiphysis. Periosteum was shown separated from surface of shaft. Proliferation of periosteum was very nicely shown to the extent of ¼ inch in thickness.

Second Operation.—The second operation was performed in the Fenway Hospital, March 30, 1911, eight weeks after the primary operation. Linear incision 5 to 6 inches long was made from the middle down to the lower end of the tibia. Tibia was exposed and periosteum carefully stripped from cortex of the bone from the lower epiphyseal line to 4 inches above it. At this point the tibia was sawed across with chain saw and removed down to, but not including, the lower epiphysis. As the Roentgen ray showed some involvement of the epiphysis, the latter was curetted very lightly. The periosteum was preserved and sutured with catgut. Plain gut was used for the skin, a drain at the lower end being left. Plaster bandage was applied with a window for drain-

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* Read at the Clinical Meeting of the Mount Sinai Hospital, Boston, Feb. 6, 1912.

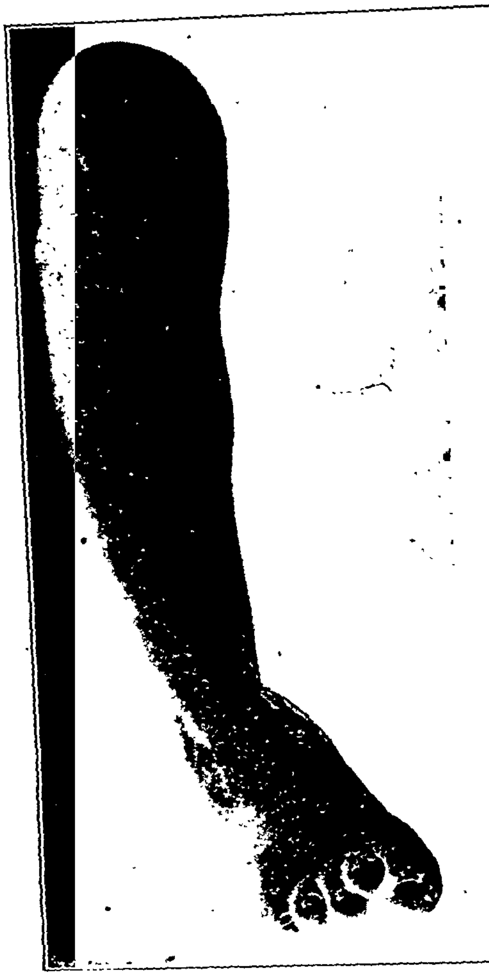

Fig. 3.—Represents foot turned in in talipes-varus position due to lack of support on inner side of leg.

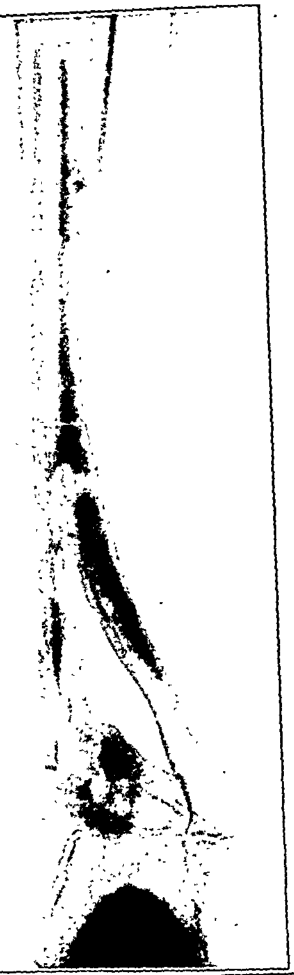

Fig. 4.—Six months after last operation—shows callus formation at junction of tibia and fibula.

age. Patient was allowed to walk with a crutch in three weeks. Wound was drained until June 23, when all sinuses were healed.

July 23, 1911: Roentgenogram (Fig. 2) was taken showing some attempt at regeneration of bone, 3 inches having formed at the lower end of the upper fragment of tibia. There was marked hypertrophy of the fibula. The periosteum of the tibia which had been preserved with the hope that it would regenerate a new tibia was not a complete success, probably because there was considerable sloughing of the periosteum after the removal of the shaft, and also because some necrotic tissue had been left in the lower epiphysis, which it did not seem good judgment during the operation to curet very thoroughly.

September, 1911: A third operation was suggested but was refused by the parents of the boy. Later all casts were removed and the patient was allowed to go without any splints or bandage on leg, although it did not seem wise to allow him to bear any weight on the leg. The only splint was that of the fibula. A photograph (Fig. 3) was taken at this time showing how the foot turned in, assuming a talipes-varus position on account of the lack of support on the inner side of the leg. Transplantation of the fibula seemed to be the only means left and consent was obtained to the operation, which was performed Jan. 3, 1912.

Third Operation.—At Fenway Hospital, Boston, tourniquet was applied and an incision was made in the scar of last operation. Periosteum of tibia was dissected up for an inch or more and a small piece of tibia removed. Fibula was then isolated and cut across fully 1¼ inches above the cut in tibia. Fibula upper end was inserted into tibia and the cuff of periosteum of tibia was sewed to periosteum of fibula. With considerable difficulty the lower end of fibula was next exposed and cut longitudinally for a distance of 3 inches. Great care was necessary to split fibula without fracturing the inner piece. This was accomplished and the inner half was sprung over to the lower epiphysis of tibia, a grooved hole having been cut in the epiphysis to receive it.

Roentgenogram (Fig. 4) taken six months after last operation, shows considerable callus formation at junction of tibia and fibula.

Bone transplantation at present is used not only to fill in defects in bones in the same limb, but also to replace bones in other parts of the body. The various substances used as substitutes for bone are (1) bones from animals; (2) bone chips decalcified (used by Senn); (3) absorbable material, as catgut, and (4) non-absorbable material, such as rubber and Mosetig-Moorhof's mixture of spermaceti. One hundred and twenty cases were reported by the last named method and all successful.

Thomas W. Huntington of San Francisco reported a case in 1905 of a boy who had a defect of several inches in the tibia following partial regeneration of the periosteum. He suggested the use of the fibula to take the place of the tibial defect by transplanting the upper fragment, and six months later the lower end was transplanted to improve the weight-bearing function. The result was good.

The cases of Stone, Codman, MacAusland and Wood, all of Boston, and the one here reported are different from any others on

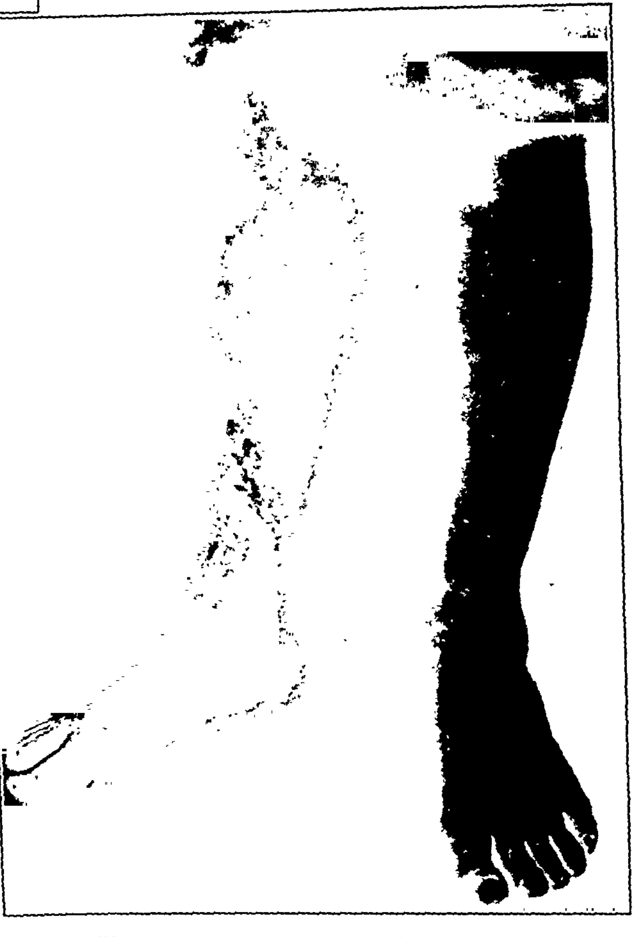

Fig. 5.—Photograph of both legs. Barring limitations of ankle movement, boy has good leg only ½ inch shorter than its fellow.

These results would seem to controvert the popular idea that most babies are born in very cold weather, as by far the larger number of my cases (383) occurred in the months from April 1 to September 30.

Delivery occurred at the following times of day, in three-hour periods:

12 p. m.-3 a. m.	72 cases	12 m.-3 p. m.	83 cases
3 a. m.-6 a. m.	87 cases	3 p. m.-6 p. m.	88 cases
6 a. m.-9 a. m.	102 cases	6 p. m.-9 p. m.	81 cases
9 a. m.-12 m.	90 cases	9 p. m.-12 p. m.	97 cases
Total a. m.	351 cases	Total p. m.	349 cases

Thus there were 337 cases of delivery in the night hours (6 p. m. to 6 a. m.) as against 363 cases in the daylight hours, again controverting public opinion. As a matter of fact, the single hour in which I delivered the greatest number of patients was 11 p. m. to midnight—forty-five cases. The fewest were delivered in the hour noon to 1 p. m.—twenty cases; but the smallest number in any three-hour period was from midnight to 3 a. m., as shown above.

AGES OF THE MOTHERS

With reference to the ages of the mothers, the births are classified according to the following grouping:

Mothers' ages from 13 to 14	2 cases
Mothers' ages from 14 to 15	2 cases
Mothers' ages from 15 to 17	40 cases
Mothers' ages from 17 to 20	116 cases
Mothers' ages from 20 to 25	223 cases
Mothers' ages from 25 to 30	174 cases
Mothers' ages from 30 to 35	82 cases
Mothers' ages from 35 to 40	41 cases
Mothers' ages from 40 to 45	20 cases
Over 45	None
Total	700 cases

By far the most prolific period of a woman's life is from 20 to 30, practically four-sevenths of the children being born to mothers between those ages. Nearly one-third are born to mothers between 20 and 25 years of age.

PARITY OF THE MOTHERS

Nearly half of the cases were in primiparae. Of these twenty patients were in the class termed "old," that is, more than 30 years old. Fifteen of them were between 30 and 35 years old. The others were from 35 to 43 years old. The use of forceps is required in a large percentage of these cases, more, I believe, from the large size of the child than from causes connected with the mother.

The next greatest number of cases were secundiparae. I have tabulated them in accordance with the parity of the mothers.

Labors	Mothers	Labors	Mothers
1	330	6	20
2	125	7	17
3	91	8	16
4	52	9	3
5	31	10	7
		11	3
		12	2
		13	3

The preceding table refers to the number of labors, not the number of children born, as in some instances there had been a twin pregnancy. This leads us naturally to the percentage of twin cases. In my seven hundred deliveries there were only eight twin cases, just a fraction over 1 per cent. of the total.

PRESENTATION

Of the 700 cases, 673 were head presentations; 22 were breech presentations; 5 cases were cross or face presentations. Practically speaking, in 96 per cent. of all cases of labor, one will have a head presentation to deal with; in 3 per cent. a breech and a little less than 1 per cent. will be cross or face presentation. I have encountered only two of the latter, one in a twin sac.

The 673 cases of head presentations may be arranged in the following classification according to position:

461 infants (68.5%) presented and were delivered in L. O. A.
58 infants (8.6%) presented and were delivered in R. O. A.
25 infants (3.7%) presented and were delivered in R. O. P.
4 infants (.6%) presented and were delivered in L. O. P.
97 infants (14.4%) presented R. O. P. but rotated to L. O. A.
18 infants (2.6%) presented R. O. P. but rotated to L. O. A.
20 infants (2.9%) presented L. O. P. but rotated to L. O. A.
1 child rotated from L. O. P. to R. O. A.
2 brow cases were converted to vertex.

In the two face cases encountered, the infant in the twin sac presented mento-anteriorly; this was quite a small child and gave no trouble. The other case was a mentoposterior in a multipara and the child was rotated instrumentally to a mento-anterior position and easily delivered. Both children lived. The latter case was seen in consultation.

Podalic version was done in all cross cases, with one exception in which the patient was a multipara; this was easily changed to a head case. Version was done in one head presentation.

In the 22 cases of breech presentations, single labors, the presentation was L. S. A. in 9 cases, R. S. A. in 10 cases, L. S. P. in 1 case and R. S. P. in 2 cases.

In twin cases, both presented head first in 5 cases; both presented breech first in 1 case, and one head and one breech in one case. In one case the occiput presented in one and the face mento-anterior in the other.

COMPLICATIONS OBSERVED

Placenta praevia was met only twice in this series. I have seen several others but they were in consultation cases not recorded here. I have lost none of the patients and have treated by packing until dilatation allowed the use of forceps or a pulling down of a foot. The children are usually still-born.

Hemorrhage of sufficient gravity to cause it to be noted was met in 17 cases. I have found hot intra-uterine douches the best agent to control it. Carcinoma uteri was found in only one case—that of an octipara, 42 years old. There was serious hemorrhage during the period of dilatation, which was rapid and nearly complete when I arrived. Convalescence was normal, but as operative measures were absolutely declined, the patient died a few weeks later. Carcinoma gastrica was a complication in a 35-year-old primipara. She died of this a few months later.

Chorea was present in one case, a sextipara, aged 35. Severe heart disease was noted in six cases. I always use an anesthetic in these cases, believing that there is less danger in the chloroform than there is in the shock to the system without it. A vaginal polyp of sufficient size to interfere somewhat with delivery was found in one case. The pedicle was tied *en masse* and the polyp cut away.

Accidental hemorrhage was met only once; the child was still-born. Complete vaginal septum, obstructing labor, was found in one case. It was longitudinal, forming a double vagina. After complete dilatation of the os uteri, it was cut and gave no further trouble. This case has been fully reported elsewhere.[1]

Acute yellow atrophy of the liver was met only once. Death resulted one week after delivery of a seven months' child, in a quartipara, aged 32. Severe varicose veins of the vulva were encountered in three cases. Procidentia uteri, the cervix being completely outside of the vulva, was found in one case.[2] Pin-hole os uteri in one patient, a primipara, aged 35, was immediately relieved by incision.

Three mothers were idiots; one was blind and two were deaf mutes; two were habitual morphin fiends; three were epileptics; two had Bell's palsy. Laparotomy was done for appendicitis during pregnancy—third month—in one case, with no bad results except to necessitate the use of forceps in delivery. The uterus had been previously suspended in one case and this fixation so interfered with uterine action as to render it necessary to use forceps to complete delivery.

Narrow pubic arch was noted in three cases. Protuberant sacrum was present in one case. Flat pelvis was noted six times. Fist or hand displaced delayed labor in three cases.

Eclampsia was encountered in twelve cases; practically all of these were in consultation work. I have seen a number of other cases of eclampsia, eighteen in all, but for various causes only twelve of these are recorded here; only one case has proved fatal and that woman was comatose fourteen hours before any physician was called. I use veratrum viride with a bold hand and dilate manually and apply forceps.

Very precipitate labor was noted in six cases. Hemorrhage is to be feared in these cases. Menstruation during pregnancy was noted in several cases, in one of which it was so regular and normal in every respect that the woman did not suspect that she was pregnant until she felt the child move.

Dry labor, or the early rupture of the membranes, is often a cause of slow labor. I have noted sixteen cases in which this occurred from twelve to forty-eight hours before labor set in; eight cases in which it was more than forty-eight hours before labor began after their rupture. In one case it was forty-six days. This case was reported.[3] Hydrops Amnii was noted in three cases. Relaxed symphysis pubis was very marked in two cases. In sixty-eight cases with the occiput anterior in fourteen with the occiput posterior, and in one mentoposterior it was found necessary to use forceps. In eleven of the occipitoposterior cases instrumental rotation was done, to anterior position; in the mentoposterior case the child was easily rotated to the anterior position and delivered. The forceps was applied to the after-coming head four times and to breech and after head in one case and to breech alone in one case.

A very short cord sometimes delays labor. In two cases I found it only 7 inches long. It was so short and about the neck in nine cases that it was broken at delivery as the head was expelled. The cord was around the neck one time in 130 cases, two times in twenty-four cases, two times around the neck and once around the arm, leg and body in one case each. It was around the neck three times in two cases; around the neck four times and the body one time, in one case; around the neck, arm and body in one case and around the body and arm in one case. A distinct knot was in the cord in three cases. Prolapse of the cord was noted three times. I have succeeded in replacing and delivering these cases by pushing up the cord and pressing the head well down. In one set of twins the cord came off from the same placenta by a common stem and divided about two inches from the abdomen. In the other seven cases, cords and placentae were distinct. In the one case there was only one sac.

Placenta succenturiata was noted three times; adherent placenta, requiring forcible detachment in five cases. Severe infection occurred in one case but the woman recovered after a long siege. Hour-glass contraction on the detached placenta caused some trouble in two cases. Hematoma vulvae, a very rare condition, occurred once. This case has been reported fully.[4]

Broadly speaking, perineal lacerations occur in all primiparae; exceptions are few. Likewise, cervical lacerations occur in all cases, regardless of how many children have been borne. All perineal lacerations, regardless of their depth, should be carefully, but not too tightly, sutured. Likewise, all cervical lacerations should be let alone, unless they penetrate so deeply as to involve the circular artery. This latter event has only occurred once in my experience, and in that case hemorrhage was furious but was quickly controlled by suture.

In these seven hundred cases, two mothers died, one of acute atrophy of the liver and the other of eclampsia. The latter patient, a negro, had been in coma for fourteen hours before any physician was called.

THE BABIES

Sex.—There were 344 boys and 348 girls in the 692 single labors. In the 16 children born twins—eight labors—there were 11 boys and 5 girls, making in all 353 girls and 355 boys in the 700 labors.

In 480 cases there were 21 still-births, a little more than 4 per cent. All infants were considered still-born that died within forty-eight hours of delivery, unless some distinct cause, aside from congenital conditions, could be shown.

Among deformities noted were two of hydrocephalus, in one of which there were also a spina bifida, club-feet and penis adherent to scrotum; two infants had cleft palate, one had a thumb absent, one had twelve toes, two had hypospadias.

1329 North 26th Street.

AN INSTANCE OF UNUSUAL SENSITIVENESS TO RESORCIN

DOUGLASS W. MONTGOMERY, M.D.
SAN FRANCISCO

In May, 1907, a patient consulted me on account of a severe dermatitis of the scalp and forehead, following the use of a dandruff cure. I ordered soothing applications under which the symptoms rapidly subsided. At the next visit, however, nine days afterward, I noticed that he had acne of the back of the neck, for which I prescribed a resorcin paste. I ordered this of moderate strength, 3.25 per cent., because the dermatitis had not yet entirely subsided. This application caused a violent reaction, and kept the patient awake all night. I then explained to him that the good effects of many medicines, among them resorcin, lay in their stimulating nature, and that with this preparation reduced one-half we would get its benefits without its overaction. This was accordingly done. The paste diluted one-half, and therefore about 1.625 per cent., still caused a violent reaction. Not only was this ointment weak, but also care was taken to have the resorcin evenly distributed in the ointment mass by first mixing it with warm glycerin, and the irritant action of the resorcin was further modified by association with oxid of zinc. The paste was prepared as follows:

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[1] Am. Jour. Obst., 1907, lv, No. 2.

[2] Virginia Med. Monthly, 1897.

[3] New York Med. Jour., May 25, 1889, p. 572.

[4] Am. Jour. Obst., May, 1905.

℞	Resorcin	4 parts
	Glycerin	2 parts
	Zinc oxid	15 parts
	White wax	3 parts
	Benzoinated lard	100 parts

First mix the resorcin in the hot glycerin. Melt together the wax and the lard, and then add the oxid of zinc and the resorcin-glycerin while constantly stirring.

The patient now recognized from the similarity of the symptoms that the dermatitis caused by the barber's lotion and the two attacks that I had succeeded in giving him were all really from the same substance, resorcin. Not wishing any further treatment along that line he stopped his visits.

The patient telephoned to me September 25, 1912, saying that he had had another attack from his old enemy, resorcin. He had been up country for a few days, and on arriving home told his sister he had a little irritation of the face and neck from sunburn. This sister, whom I was treating for rosacea, told him she had the loveliest and most healing of ointments, and she straightway applied it. During the night he awoke and instantly recognized the same drawing, burning sensation accompanied by intense itching that he had experienced both with the dandruff cure and with the paste I had prescribed for his acne five years before. His sister's ointment, among other ingredients, contained about 7.5 per cent. of resorcin, and was therefore much stronger than the previously mentioned paste. The dermatitis was very severe, and the pruritus was atrocious, an interesting circumstance in view of the fact that resorcin, like the phenols, is, supposedly, antipruritic. The skin was thickened, brawny, and bright red, and there were many vesicles, some of which were nearly bullae.

The patient's sufferings were not alleviated by reflecting on the manner in which his latest trouble had arisen. Ever since his first experience he had been careful to avoid all possibility of a recurrence of the accident, and had been particularly watchful of barbers and their lotions. To have his sister become the means of getting another attack he therefore considered an especially shabby bit of bad fortune.

On inquiry if he knew of any hereditary sensitiveness to drugs in the family he said he did not, and added that if any such idiosyncrasy existed he should know of it, because his sister was a full sister, and they were both children of parents who were first cousins. With this close relationship it is particularly interesting that the patient should exhibit this strong idiosyncrasy and his sister be quite normal.

Resorcin is a phenol isomeric with pyrocatechin and hydrochinon; the two latter are, however, not employed in medicine. It is soluble in alcohol, in glycerin and in water, and is colorless and odorless, and may be associated without incompatibility with a great number of other medicaments. These good qualities, together with its intrinsic therapeutic merits, make it a favorite with men practicing in diseases of the skin.

Török[1] recommends a weak watery solution (from 1:1,000 to 2:1,000) of resorcin in inflammations of the skin complicating pyogenic infection. I have never used it in this way. It might act as a weak antiseptic, and also soothingly and beneficially on the epithelium, being analogous in this respect to phenol (carbolic acid) and the coal-tars. Employed on the skin as a 6 or 7 per cent. ointment or a 5 per cent. lotion, it acts as a beneficial stimulant, antipruritic and antiseptic.

Sabouraud, in his recently published work on diseases of the skin, includes resorcin in a number of formulas for the treatment of psoriasis, pityriasis and pustular dermatitis of the scalp, the non-leeting or non-oozing intertrigos, seborrheic eczema of the forehead and of the naso-genial fold, and in that form of alopecia areata in which a great many bald patches appear at one time. For painful fissuring of the hands or lips due to exposure to cold he advises the use of a weak (0.1 per cent.) resorcinated glycerole of starch, and in chronic acne of the back of the neck he combines resorcin with sodium chlorid and sulphur. His reason for making this last combination is that, according to the researches of Brisson, free sulphuric acid is formed which causes the sulphur to act more deeply in the tissues. The notes of Sabouraud's work[2] are given here to show in what esteem he holds this drug, although he does not specially mention it or review its action.

Resorcin is frequently prescribed in acne of the face, in which it is an excellent remedy. In a paste of from 7 to 8 per cent. strength it exerts the beneficent action of the coal-tars on epithelial cells, an action that could be designated as eu-epithelial, and it is also a stimulant and an antiseptic. To get a beneficial, soothing effect it may be necessary, especially in erethic cases, in which flushing of the face is a prominent symptom, to reduce the strength of the ointment to 3 or 4 per cent., always taking care to combine it with zinc oxid, in order still further to reduce its stimulating action on the blood-vessels. If an active desquamation of the epithelial cells is desired, as in the treatment of acne called "shelling," then a much stronger ointment may be used, even up to 15 or 20 per cent. I never employ it in this way.

When the eruption of lupus erythematosus is acute and very stimulating treatment such as that with solid carbon dioxid is out of the question, then a milder course is judicious. At night equal parts of ichthyol and water may be painted on, and wiped off the following morning with olive oil, and then the following mild resorcin paste applied, to be left on during the day:

℞	Resorcin	2 parts
	Glycerin	1.5 parts
	Zinc oxid	5 parts
	White wax	1 part
	Benzoinated lard	33 parts

Mix. Apply during the day.

Resorcin when applied to the skin may poison by absorption. Nothen[3] has reported two such instances. One of the patients, a boy of 19, was ordered a 15 per cent. resorcin-sulphur salve as a treatment for seborrheic eczema. A deep coma developed, from which he finally recovered. The other patient was an infant, 11 days old, for whom a 7 per cent. resorcin-petrolatum ointment was ordered as a dressing for pemphigus neonatorum. This patient died. Nothen advises care in the employment of resorcin in children and in delicate people, or when there are large raw surfaces permitting free absorption. Sigismund Kaiser[4] also has reported a nearly fatal intoxication following the employment of a 50 per cent. resorcin zinc oxid paste.

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[1] Török: Die lokale Behandlung d. Entzündung oberfl. Hautkrankheiten, Arch. f. Dermat. u. Syph., cxi, 127.

[2] Sabouraud, R.: Entretiens dermatologiques, Paris, 1913.

[3] Nothen, H.: Ueber Resorcinvergiftung bei äusserer Anwendung, Med. Klin., 1908, iv, 901; abstr., Dermat. Jahresb., iv, 38

CONCLUSIONS

In summing up we may say that resorcin when applied in full strength on the skin acts as a highly irritant caustic. It is a powerful antiseptic, and when applied as a strong lotion or ointment, causes an active desquamation of the upper epithelial layers. It therefore is an efficient cutaneous antiseptic, both because it kills the bacteria, and because it produces an exfoliation of the bed in which they lie. Besides being a caustic, an irritant and an antiseptic it has a eu-epithelial action common to it and the tars and coal-tars, so that when properly diluted it lessens cutaneous irritation, and favors the return of epithelial cells to normal physiologic function. When applied in strong dosage over large surfaces, especially if these surfaces are denuded, it may be absorbed and cause dangerous symptoms of internal poisoning, or even coma and death.

323 Geary Street.

DIABETIC FOODS OFFERED FOR SALE IN THE UNITED STATES

A PRELIMINARY REPORT

JOHN PHILLIPS STREET, M.S.
Chemist, Connecticut Agricultural Experiment Station
NEW HAVEN, CONN.

Recent references in THE JOURNAL to *gluten flours* and certain other foods offered for the use of diebetics suggest that a preliminary report of an investigation just about completed in my laboratory by Prof. L. B. Mendel and myself might be useful to many diabetics and to physicians who are called on to arrange their dietaries.

In 1906 this laboratory, then under the direction of Dr. A. L. Winton, who is now with the Department of Agriculture, made its first examination of commercial diabetic foods. In nearly every year since it has analyzed various other brands as they appeared on the market. The demand for the reports on these foods and the many inquiries directed to us have led us to make a more extensive review of the situation, and to collect as far as possible all information as to the quality of the so-called "diabetic" foods offered to the American public. That the present state of the market is unsatisfactory is well known, and the inferiority (from the diabetic's point of view) of many of the products at present offered is unfortunately familiar to all careful dietitians. The most dangerous feature of the present situation is that the unsuspecting patient is led to purchase foods, generally at an exorbitant price, which are not only misrepresented but which may be positively harmful to him. In this day of self-medication this condition is all the greater menace to the diabetic.

Without any attempt to suggest methods of treatment for diabetes, which is the province of the physician, I may say that it is well recognized that diabetes is primarily a disturbance of nutrition, in which the normal ability of the body to make use of carbohydrates is more or less completely impaired. All recent authorities agree in placing the chief emphasis on the rôle of diet in the management of this disease. Janeway, Benedict, Joslin, Futcher, Falta, Strauss, von Noorden and other writers on diabetes could be quoted at length in support of this view. The importance of a restriction of the carbohydrates in certain cases and certain aspects of diabetes is admitted by practically all competent authorities. In order to prescribe a starch-free and sugar-free dietary, which at times is necessary, and to know accurately the actual amount of these carbohydrates contained in the various available foods, the physician must rely on the co-operation of the chemist to furnish this requisite information. This is our excuse, if any be needed, for our present investigation.

There seems to be some uncertainty as to what sort of preparation is entitled to be sold as a "diabetic" food. Granting the desirability of feeding the patient all the carbohydrate he can tolerate, and recognizing the possible value of the oatmeal, potato, rice and other treatments, in which a relative abundance of carbohydrate is fed for a limited period, it would seem that a low percentage of carbohydrates should be a requisite for a "diabetic" food. Certainly no special food containing nearly as much carbohydrate as a normal food of the same class should be entitled to this appellation. Flours, breads,, biscuits, chocolates, breakfast-foods, macaroni, etc., containing only a slightly lowered percentage of carbohydrates, are no more entitled to be called "diabetic" foods than the normal foods themselves. It is true that, when a patient's carbohydrate tolerance is well established, the use of foods containing 20, 25 and even 35 per cent. of carbohydrates might be permissible, when used under the direction of a competent physician; but when a strict diet is necessary, such as is required to determine this tolerance, even these relatively low percentages are objectionable, if not dangerous.

It has been our purpose to include in this investigation, as nearly as possible, all available data on the composition of all diabetic foods sold in America. Our report, therefore, will be in part compiled, but in greater part will consist of our original analyses. It will show 539 analyses of about 400 brands, 200 of which are our own new analyses and 110 those made in this laboratory in previous years.

While the purpose of this preliminary note is to call attention to the better preparations rather than to emphasize those which are obviously objectionable and fraudulent, it may not be out of place to summarize briefly our findings in general. The full details of the investigation are now being prepared for publication and will shortly be issued as a report from the Connecticut Agricultural Experiment Station.

One hundred and eight samples of sixty-eight brands of flours and meals are included in the report. Sixty-seven of these were sold as "gluten" flours, twenty of which did not even satisfy the low government standard of 35 per cent. protein. Twelve samples contained less than 13 per cent. carbohydrates, while the remaining gluten flours ranged from 28 to 76 per cent.

The soy bean flours contained from 23 to 26 per cent. of carbohydrates, the almond meals 17 per cent., and a cotton-seed flour 21 per cent. Other "diabetic" flours, not specifically sold as "gluten" flours, contained from 67 to 80 per cent.

The purchaser of gluten flours at the present time may obtain preparations containing from 87 to 11 per cent. of protein and from 4 to 76 per cent. of carbohydrates, at a cost of from 9 cents to $1.56 per pound.

In view of the government's low standard for gluten flour, and because of the wide variations in composition found in the brands at present on the market, proper protection of the diabetic demands that the manufacturers of these flours should be required to state on the label the guaranteed percentages of both protein and carbohydrates.

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[4] Kaiser, Sigismund: Berl. klin. Wchnschr.; abstr., Dermat. Jahresb., i, 37, 33, 1909.

Three samples of American soft gluten breads contained from 35 to 37 per cent. of carbohydrates; two other brands contained 49 and 54 per cent., little, if any, lower than found in ordinary wheat bread.

One hundred and forty-eight analyses of 112 brands of hard breads, biscuits, rusks, cakes and other bakery products are included. Eight brands of *Luftbrot,* or aerated bread, are reported; two of these contained from 9 to 12 per cent. of carbohydrates, one 20 per cent., two from 31 to 33, and the other three from 44 to 54 per cent.

A number of the brands of rolls, biscuits, breads, etc., showed satisfactorily low percentages of carbohydrates, thirty-five samples containing from 1 to 25 per cent., forty-four samples containing from 35 to 55 per cent., and forty-one over 55 per cent., seven of the latter exceeding 72 per cent.

The cost of the *Luft* breads ranged from 71 cents to $2.33 per pound. Biscuits, containing 11 per cent. or less of carbohydrates, cost from 72 cents to $3 per pound. A number of brands, containing from 43 to 77 per cent., cost from $3 to $3.60 per pound. Even the cheaper preparations, containing from 50 to 77 per cent., no better, and in some cases even worse, for the diabetic's use than ordinary bread, cost from 30 to 41 cents per pound.

Fourteen samples of breakfast-foods were analyzed, five of which contained from 44 to 54 per cent. of carbohydrates, somewhat lower percentages than normal. Seven of the ten brands of recommended macaroni, noodles, etc., contained over 70 per cent. of carbohydrates, the other three from 42 to 51 per cent.

The analyses are given of fourteen samples of peanut butter, five of almond paste and butter, two of pine-nuts, one of almonds and ten of miscellaneous nut foods. As was to be expected, most of these preparations proved to be suitable diabetic foods. The peanut butters contained from 12 to 20 per cent. of carbohydrates, with an average of 15 per cent. The three almond pastes contained from 30 to 40 per cent., one showing an addition of 11 per cent. cornstarch. The two almond butters contained only 7 and 8 per cent., the pine-nuts from 3 to 8 per cent., and the almonds 16 per cent. The other nut preparations contained from 6 to 44 per cent. carbohydrates.

Seven brands of diabetic chocolates contained from 10 to 50 per cent. carbohydrates, while four cocoas contained from 21 to 51 per cent. The chocolates cost from $1.63 to $2.06 per pound, and the cocoas were similarly expensive.

Two sugar-free milks were examined which were true to name, containing only the merest traces of carbohydrates. One "diabetic" baking-powder examined contained no starch, another brand from 14 to 16 per cent. Various jams, preserves and other fruit products were examined which contained from 1.24 to 7 per cent. of invert sugar, percentages far below the normal. A currant-juice contained only 0.85 per cent. of invert sugar. Four of the fruit preparations were artificially colored with a coal-tar dye—a permitted color to be sure, but seemingly quite out of place in foods intended primarily for the use of invalids.

As already stated, the main purpose of this investigation was not so much to detect fraud as to secure information which would be of benefit to the diabetic and to the physician who seeks foods suitable for a low carbohydrate diet. In the accompanying tabulations a summary is given of the brands, *sold as diabetic foods,* which showed less than 35 per cent. of carbohydrates, arranged in the order of their carbohydrate[1] content. A date in parentheses following a brand name signifies that the brand named showed variations in different years; in other cases, in which the agreement was close, the results have been averaged.

BRANDS SHOWING UNDER 5 PER CENT. OF CARBOHYDRATES

	Per Cent.
Casoid Baking Powder	.0
Dr. Bouma Sugar-Free Fat-Milk	.0
Whiting's Sugar-Free Milk	.0
Rademann's Currant Juice "ohne Zucker"	0.9
Kalari Batons (1909)	0.9
Glidine	1.0
Casoid Sugarless Marmalade	1.2
Casoid Sugarless Jam	1.5
Kalari Biscuit	1.7
Casoid Dinner Rolls	2.1
Casoid Flour	2.2
Jireh Diatetic Pine Nuts	3.4
Rademann's Preserved Fruits, "entzuckert"	3.5
Kellogg's Protose	3.6
Barker's Gluten Food "A"	4.1
Kellogg's Pine Nuts	4.2
Kellogg's 80 Per Cent. Gluten Biscuit	4.4
Bischof's Gluten Flour	5.0

BRANDS SHOWING FROM 5 TO 10 PER CENT. OF CARBOHYDRATES

	Per Cent.
Casoid Biscuits No. 2	5.6
Rademann's Preserved Fruits "in eigenen saft"	5.7
Barker's Gluten Food "B"	5.9
Kellogg's Nuttolene	6.3
Nashville Sanitarium Nutcysa	6.3
Huntley and Palmer's Akoll Biscuit	6.5
Nashville Sanitarium Nutfoda	6.8
Rademann's Preserved Fruits "ohne Zucker"	7.0
Muller's Tomatoes für Diabetiker	7.3
Barker's Gluten Food "C"	7.7
Kalari Batons (1913)	7.7
Casoid Biscuits No. 3	7.8
Kellogg's 80 Per Cent. Gluten (1912)	7.9
Casoid Biscuits No. 1	8.0
Kellogg's Almond Butter	8.2
Fromm's Uni Bread	9.0
Metcalf's Vegetable Gluten (1913)	9.8

BRANDS SHOWING FROM 10 TO 15 PER CENT. OF CARBOHYDRATES

	Per Cent.
Kellogg's Pure Gluten Biscuit (1906)	10.2
Health Food Pure Washed Gluten Flour (1913)	11.1
Health Food Alpha Diabetic Wafers	11.3
Loeb's Imported Gluten Flour	11.8
Health Food No. 1 Proto Puffs	11.9
Kellogg's Potato Gluten Biscuit (1906, 1909)	11.9
Kellogg's Nut Meal	12.1
Kellogg's 80 Per Cent. Gluten (1909)	12.5
Nashville Sanitarium Nut Butter	13.0
Kellogg's Nut Butter	13.9
Bischof's Diabetic Gluten Bread	14.3
Jireh Diabetic Baking Powder	15.0
Peanut Butter (range from 12 to 20)	15.0

BRANDS SHOWING FROM *15 TO 20* PER CENT. OF CARBOHYDRATES

	Per Cent.
Casoid Chocolate Almonds	16.1
California Paper Shell Almonds	16.3
Callard's Cocoanut Biscuit	16.4
Rademann's Diabetiker-Chokolade	16.9
Health Food Almond Meal	16.9
Callard's Ginger Biscuit	18.1
Callard's Prolactic Biscuit	19.3

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[1] In the tables "carbohydrates" is used as synonymous with "nitrogen-free extract."

BRANDS SHOWING FROM 20 TO 25 PER CENT. OF CARBOHYDRATES

	Per Cent.
Callard's Almond Shortbreads	20.7
Callard's Casoid Rusks	20.8
Rademann's Diabetiker-Makronen	20.8
Health Food Protosoy Diabetic Wafers	21.2
Jireh Patent Cotton-Seed Flour	21.3
Casoid Lunch Biscuit	21.6
Rademann's Diabetiker-Chokolade Biscuit	21.9
Cereo Soy Bean Gruel Flour	23.7
Health Food Salvia Sticks	24.0
Health Food Protosoy Soy Flour	24.5
Metcalf's Soja Bean Meal	25.0

BRANDS SHOWING FROM 25 TO 35 PER CENT. OF CARBOHYDRATES

	Per Cent.
Jireh Soja Bean Meal	25.8
Brusson Chocolat with Added Gluten	26.4
Rademann's Diabetiker-Stangen	27.0
Rademann's Diabetiker-Dessert-Gebäck	27.5
Nashville Sanitarium Malted Nut Food	27.5
Metcalf's Vegetable Gluten (1906)	28.1
Health Food Pure Washed Gluten Flour (1906)	29.5
Fromm's Luft Bread	30.7
Spencer's Almond Paste	31.6
Fromm's Conglutin-Diabetiker-Schokolade	32.7
Health Food No. 2 Proto Puffs	33.3
Ferbuson Gluten Bread	33.6
Gum Gluten Breakfast Food	34.2

THE ABSURDITIES AND THE COMMERCIALISM OF THE PROPOSED NINTH DECENNIAL REVISION OF THE UNITED STATES PHARMACOPEIA *

OLIVER T. OSBORNE, M.D.
Professor of Therapeutics at Yale University
NEW HAVEN, CONN.

As a list of drugs approved for the next Pharmacopeia has already been published, and as the United States Pharmacopeia is a book of public interest and a legal standard, made so by the federal Food and Drugs Act, what follows is no breach of confidence but rather a necessary presentation for public approval, or disapproval, of a subject that is vital to each and every person who may become a patient, and especially vital to each and every physician, namely, what drugs and preparations shall be officialized in the next Pharmacopeia, a book of standards of purity of the drugs and preparations that are of therapeutic value. A thing that has no therapeutic value should not be termed a drug, and useless things should not appear in this book of drug values.

The primary question is, then, who shall decide what drugs are of sufficient positive therapeutic value, in this year 1913, to be given a legal official standard for the next ten years? Shall things like lemon-peel and orange-peel be dignified by official description ("Limonis cortex, the recently separated outer rind of the ripe fruit of *Citrus limonum* risso; Aurantii dulcis cortex, the recently separated outer rind of the ripe fruit of *Citrus aurantium* Linné") in this book to the distinct belittling and actual insult of such drugs as quinin, digitalis and strychnin? Placing lemon-peel in a legal position coequal to that held by digitalis is like inviting the boy who takes your hat to a seat at the guest table with the president of a country, or like giving the laborer who digs the grave a seat in the chancel with the minister who reads the burial service; it is absurd.

Shall drugs which are therapeutically valueless and whose activities are mythical and historical (such as marigold, saffron, condurango, etc.) appear in this supposedly scientific book of drugs found valuable in the year 1913?

Now, who selected these drugs and preparations that have been approved for the ninth revision of the United States Pharmacopeia, at least approved up to the date of March, 1913? Let us pray that the revision committee, the servants of the public, appointed for the public good, will reconsider this list and cut out the absurdities and commercialism from this ninth revision. No layman desires to take any drug but the best, if he must take any at all, and the best preparation of it. No physician would desire any less.

1. At the Pharmacopeial Convention, in 1910, it was stated on the floor of the house that it was the duty of physicians to select the drugs, and the duty of the pharmacists to decide how the preparations of the drugs should be made.

2. Fifty members of the Pharmacopeial Convention were elected a committee on revision. Of these fifty, six only are practicing physicians; that is, only six members of this revision committee are qualified to judge at the bedside of the value of the action of a drug.

3. A subcommittee on scope was appointed, consisting of seven men, four of whom are practicing physicians, Doctors S. Solis-Cohen (chairman), Philip Marvel, H. C. Wood, Jr., and O. T. Osborne; two are skilled medical laboratory pharmacologists, Drs. Reid Hunt and Torald Sollmann; and one, a skilled pharmacologist from the standpoint of pharmacy, Dr. Rusby. This committee, after my urgent insistence, adopted the following guide for the selection of drugs for the Pharmacopeia, namely: that the drugs shall be of "therapeutic usefulness" or of "pharmaceutic necessity." This of course became a joke, as it was not at all lived up to, any more than was the decision that physicians should be the ones to select the drugs.

4. The executive committee, composed of the chairmen of the various subcommittees, consists of one practicing physician (Dr. Cohen), two scientific medical laboratory men (Drs. Sollmann and Anderson), Dr. Wiley, ex-chief of the Bureau of Chemistry, and the other eleven are representatives of some branch of pharmacy. This executive committee is the "court of last resort," and has the final vote on the recommendations of the Subcommittee on Scope. They can approve or disapprove of such recommendations by a simple plurality of the votes cast.

One hundred and fifty-eight drugs and preparations were deleted by the subcommittee on scope. Seventy-nine of these deletions, just half, were voted in by the executive committee in spite of this adverse recommendation, and it will be remembered that the only member of the executive committee practicing at the bedside had already voted once in the subcommittee on scope, and had himself dissolved, favorably to admission, in the subcommittee sixty-five tied votes. The executive committee also exercised its prerogative rather discourteously to the subcommittee on scope by approving a number of drugs and preparations that had not even come before the subcommittee. Among such drugs are fluidextract of phytolacca, tincture of quillaja, oleoresin of parsley seed, purified animal charcoal, etc. It should be remembered in urging deletions that any physician can obtain a drug or preparation omitted from the new Pharmacopeia by the standard placed in an older Pharmacopeia. Therefore, the deletion of useless drugs and preparations does not mean privation.

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* Read at the Fourteenth Annual Meeting of the American Therapeutic Society held in Washington, D. C., May 5 and 6, 1913.

One hundred and seventeen thousand prescriptions were collected from different parts of the United States and printed and circularized by the chairman of the revision committee, and this list was used as a basis to estimate the number of times a drug was ordered as to whether it had therapeutic value or not. In other words, considering the large number of useless, worthless drugs and preparations approved for this next Pharmacopeia, the book will be founded more or less on commercialism and not on medicinal or therapeutic values. Officialization of a worthless drug allows the pharmaceutical houses to make these useless preparations and compels the druggist to buy them and to carry on his shelves a mass of articles which are absolutely useless from every scientific and clinical point of view. This is commercialism.

STANDARDS

This word is much overworked, and is used as a cloak or covering for all sorts of arguments and all kinds of defense of all kinds of drugs and preparations by those who desire a large Pharmacopeia. How can you standardize such a thing as lemon-peel or saffron? Many so-called drugs cannot be standardized by any known method. The pharmacal members of the revision committee, and especially the chairman of the revision committee, believe that it is necessary to officialize every ingredient of every fool preparation, placing it in its alphabetical order in the Pharmacopeia. Carrying out this rule causes the most ridiculous absurdities. The officialized lemon or orange is obtained from the nearest fruit store, the flaxseed from the nearest feed store, the olive oil in purity depends on from whom it is bought, etc., etc., *ad nauseam.* Why do we not officialize raisins, cranberry sauce, currants, wine jelly, fig syrup, unfermented grape juice, rum, gin? Why not champagne? Extract of malt has been officialized; why not beer?

Another great bugaboo of the members of the revision committee who think the Pharmacopeia should cover everything is the fact that, if we want a certain substance officialized, its antecedent must be official. This causes more absurdities and also many gross inconsistencies. The fact that we need an aromatic oil up to standard is no reason for officializing that particular aromatic. Inconsistencies are shown by the fact that dilute hydrocyanic acid has been recognized without an antecedent, and dilute hydrobromic acid also. We do not state how the whisky of the Pharmacopeia should be made. We did not state from what grapes the red and white wine of the last Pharmacopeia should be made, etc. In other words, it is absolutely impossible to be consistent, and why should we load the Pharmacopeia with substances that have no value whatsoever as drugs?

The following drugs, preparations and things approved by the executive committee for the next Pharmacopeia are substances that I criticize. Please remember "that medical men were to select the drugs that should enter the Pharmacopeia"; also please remember that the subcommittee in scope adopted as its guide "therapeutic usefulness" and "pharmaceutic necessity." Unless anything which can be sold at a profit be considered a pharmaceutic necessity the lack of necessity of standardizing some of the following substances will be readily noted, and the lack of consistency that is inevitable is obvious; hence, once more, why litter up an official, supposedly scientific book like the United States Pharmacopeia by listing and describing the majority, at least, of the following substances?

Adeps (lard).
Althaea (marshmallow).
Amygdala dulcis (sweet almond).
Amylum (starch).
Aqua.
Aurantii amari cortex (bitter orange-peel).
Aurantii dulcis cortex (sweet orange-peel).
Cantharidis (Spanish flies).
Cera alba (white wax).
Cera flava (yellow wax).
Cetaceum (spermaceti).
Charta sinapis (mustard paper).
Coccus (cochineal).
Coriandrum (coriander).
Emplastrum adhesivum (adhesive plaster).
Extractum malti (extract of malt).
Foeniculum (fennel).
Gelatinum (gelatin).
Gossypium purificatum (absorbent cotton).
Humulus (hops).
Limonis cortex (lemon-peel).
Limonis succus (lemon-juice).
Linum (flaxseed).
Lycopodium.
Maltum (malt).
Manna.
Mel (honey).
Mel depuratum (clarified honey).
Mel rosae (honey of roses)
Mentha piperita (peppermint).
Mentha viridis (spearmint).
Oleum gossypii seminis (cottonseed oil).
Oleum lini (linseed oil).
Oleum olivae (olive oil).
Paraffinum (paraffin).
Pepo (pumpkin seed).
Pix liquida (tar).
Pyroxylinum (soluble guncotton).
Resina (rosin).
Rosa gallica.
Saccharum (cane-sugar).
Saccharum lactis (milk-sugar).
Sapo (white Castile soap).
Sassafras.
Sassafras medulla.
Sevum praeparatum (prepared suet).
Sodii chloridum (salt).
Terebinthina (turpentine).
Terebinthina Canadensis (Canada turpentine).
Ulmus (slippery elm).
Vanilla.

The following spices are not needed in the Pharmacopeia. Their oils are officialized.

Anisum (anise).
Capsicum (red pepper).
Cardamomum (cardamom).
Carum (caraway).
Caryophyllus (clove).
Cinnamomum Saigonicum (Saigon cinnamon).
Cinnamomum Zeylanicum (Ceylon cinnamon).
Myristica (nutmeg).
Pimenta (allspice).
Piper (black pepper).
Salvia (sage).
Sinapis alba (white mustard).
Sinapis nigra (black mustard).
Zingiberis (ginger).

Many of the above preparations, such as spices, sugar, lard, olive oil, linseed oil, salt, etc., are required by the pure food laws to come up to a certain standard. For such articles as orange-peel, lemon-peel, etc., there can be no standard. If it is the object of the Pharmacopeia to prove what lemon-peel is, the description should go back to the lemon tree, as it might not be a lemon unless proved such from the beginning.

As the Pharmacopeia is not a book of sanitary science, it does not seem advisable to describe or standardize water. If plain (not distilled) water is used in making preparations, it will be the ordinary drinking-water of the city, town or village in which the drug store is located.

The following approved synthetics should not be officialized in the Pharmacopeia, as their purity and labeling should be controlled by the Pure Food and Drug Laws:

Benzaldehydum (synthetic oil of bitter almond).
Eugenol (synthetic oil of cloves).
Safrolum (synthetic oil of sassafras).
Vanillinum (vanillin, a synthetic vanilla).

A considerable number of metals and chemicals that are of no drug value have been approved for this Pharmacopeia. It is hardly the object of this book to give a standard for the purity of a pure chemical. If this is its object, why stop at the limited number that are described? Among a number of such may be mentioned aluminum hydroxid, benzin, potassium dichromate, potassium ferrocyanid, monohydrated sodium carbonate, sodium cyanid, uranium nitrate, etc.

USELESS DRUGS

The commercialism of the Pharmacopeia is shown by officializing a large number of useless drugs and preparations. Some have no medicinal value whatever; others are markedly inferior to other drugs of the same class. The list of drugs follows, and although many physicians will disagree with the entire lack of value of most of them, I think no one will assert that any one of them is needed to cure a patient of an ailment or to treat a condition that may not be better treated by more active drugs.

- Anthemis (chamomile).
- Arnica.
  - Tinctura arnicae.
- Berberis. (Oregon grape-root).
  - Fluidextractum berberidis.
- Calendula (marigold).
  - Tinctura calendulae.
- Calumba (calumbo).
  - Fluidextractum calumbae.
  - Tinctura calumbae.
- Chondrus (Irish moss).
- Cimicifuga (black snakeroot).
  - Extractum cimicifugae.
  - Fluidextractum cimicifugae.
  - Tinctura cimicifugae.
- Condurango.
- Convallaria (lily of the valley).
  - Fluidextractum convallariae
- Crocus (saffron).
- Eriodictyon (yerba santa).
  - Fluidextractum eriodictyi.
  - Fluidextractum eriodicyti aromaticum.
- Frangula (alder buckthorn).
  - Fluidextractum frangulae.
- Gambir (pale catechu).
  - Tinctura gambir composita.
- Gossypii cortex (cotton root bark.)
  - Fluidextractum gossypii corticis.
- Grindelia.
  - Fluidextractum grindeliae.
- Guaiacum (guaiac).
  - Tinctura guaiaci.
  - Tinctura guaiaci ammoniata.
- Haematoxylon.
  - Extractum haematoxyli.
- Kino.
  - Tinctura kino.
- Krameria (rhatany).
  - Fluidextractum krameriae.
  - Tinctura krameriae.
- Lactucarium.
  - Syrupus lactucarii.
  - Tinctura lactucarii.
- Leptandra (Culver's root).
  - Extractum leptandrae.
  - Fluidextractum leptandrae.
- Lupulinum.
  - Fluidextractum lupulini.
  - Oleoresina lupulini.
- Matricaria (German chamomile).
- Mezereum.
  - Fluidextractum mezerei.
- Moschus (musk).
  - Tinctura moschi.
- Oleoresina petroselini (parsley apiol).
- Oleum hedeoma (oil of pennyroyal).
- Pareira.
  - Fluidextractum pareirae.
- Phytolacca (poke).
  - Fluidextractum phytolaccae.
- Pyrethrum (pellitory).
  - Tinctura pyrethri.
- Quassia (bitter wood).
  - Tinctura quassiae.
- Quillaja (soapbark).
  - Tinctura quillajae.
- Rhus glabra (sumach).
  - Fluidextractum rhois glabrae.
- Sabal (saw palmetto).
  - Fluidextractum sabal.
- Sanguinaria (bloodroot).
  - Tinctura sanguinariae.
- Sarsaparilla.
  - Fluidextractum sarsaparillae.
  - Fluidextractum sarsaparillae compositum
- Senega (senega snakeroot).
  - Fluidextractum senegae.
  - Syrupus senegae.
- Serpentaria (Virginia snakeroot).
  - Fluidextractum serpentariae.
  - Tinctura serpentariae
- Staphisagria (stavesacre).
  - Fluidextractum staphisagriae.
- Stillingia (queen's-root).
  - Fluidextractum stillingiae.
- Sumbul.
  - Extractum sumbul.
  - Fluidextractum sumbul
- Taraxacum (dandelion).
  - Extractum taraxaci.
  - Fluidextractum taraxaci
- Triticum (couch grass).
  - Fluidextractum tritici.
- Uva ursi (bearberry).
  - Fluidextractum uvae ursi.
- Xanthoxylum (prickly ash).
  - Fluidextractum xanthoxyli.
- Zea (corn-silk).
  - Fluidextractum zeae.

INFERIOR PREPARATIONS

The following drugs are very much inferior to similar and better-acting drugs. Why should we have them officialized in this Pharmacopeia? Many of them are simple preparations that are inferior to better preparations. I realize, of course, that many physicians will disagree with me in regard to the individual drugs and preparations, but as a class each physician will certainly decide against them if he is familiar with the pharmacology of these and better drugs.

- Acetum scillae (vinegar of squill).
- Ammonii bromidum.
- Ammonii iodidum.
- Ammonii salicylas.
- Bismuthi et ammonii citras.
- Calcii bromidum.
- Cambogia (gamboge).
- Camphora monobromata.
- Carbo animalis purificatus (purified animal charcoal).
- Ceratum plumbi subacetatis (Goulard's cerate).
- Cerii oxalas (cerium oxalate).
- Cinchoninae sulphas.
- Euonymus (wahoo).
  - Extractum euonymi.
- Extractum quassia.
- Fluidextractum cinchonae.
- Fluidextractum digitalis.
- Fluidextractum gentianae.
- Fluidextractum rosae.
- Glyceritum amyli (glycerite of starch).
- Glycyrrhizinum ammoniatum (ammoniated glycyrrhizin).
- Guarana.
  - Fluidextractum guaranae.
- Infusum pruni virginianae.
- Liquor acidi arsenosi.
- Liquor arseni et hydrargyri iodidi.
- Liquor hydrargyri nitratis.
- Liquor subsulphatis (Monsel's solution).
- Liquor zinci chloridi (solution of zinc chlorid).
- Magnesii oxidum ponderosum (heavy magnesium oxid).
- Oleatum quininae (oleate of quinin).
- Oleum picis liquidae (oil of tar).
- Pilocarpinae nitras.
- Quininia.
- Sodii acetas.
- Sodii chloras.
- Sodii phosphas exsiccatus.
- Styrax.
- Sulphonmethanum.
- Syrupus rosae
- Zinci acetas.

MIXTURES

It is beneath the dignity of the Pharmacopeia to include a lot of mixtures which contain fool ingredients or have multiple ingredients. We should not officialize such absurdities. The following are the preparations referred to:

Name.	Number of Ingredients.
Elixir adjuvans	11
Elixir ferri, quininae et strychninae phosphatum	15
Extractum colocynthidis compositum	5
Infusum sennae compositum (black draught)	5
Liquor ferri et ammonii acetatis (Basham's mixture)	12
Mistura glycyrrhizae composita (brown mixture)	19
Mistura rhei et sodae	5
Pilulae catharticae compositae	8
Syrupus hypophosphitum compositus	10
Syrupus sarsaparillae compositus	7
Syrupus scillae compositus	5
Tinctura benzoini composita	5

The following drugs were refused admission to the Pharmacopeia by the executive committee after they had been approved by the subcommittee on scope on the ground of literal interpretation of the general principles of the Pharmacopeial Convention. It would certainly seem better to interpret these rules and regulations in the spirit in which they were intended; a useful drug should, if possible, receive a standard in the Pharmacopeia. The executive committee has approved of such preparations as erythrol tetranitrate, morphin diacetyl hydrochlorid (heroin hydrochlorid), morphin ethylhydrochlorid (dionin), theobromin sodiosalicylate (diuretin), etc. The valuable drugs thus refused after recommendation by the subcommittee on scope are:

Acetylsalicylic acid (aspirin).
Ammonium sulpho-ichthyolate (ichthyol).
Diethyl-barbituric acid (veronal).
Sodium diethyl-barbituric acid (veronal-sodium).
Epinephrin.
Eucain.
Holocain hydrochlorid.
Novocain.
Methyl ester of para-aminometaoxybenzoic acid (orthoform).
Protargol.
Stovain.

PERSONNEL OF COMMITTEES

The subcommittee on scope consists of:

S. Solis-Cohen, M.D., (chairman), Professor of Clinical Medicine, Jefferson Medical College, Philadelphia.
Reid Hunt, M.D., in Hygienic Laboratory, Washington.
Philip Marvel, M.D., Practicing Physician; Trustee American Medical Association.
O. T. Osborne, M.D., Professor of Therapeutics, Yale University.
H. H. Rusby, M.D., Pharmacognosist; Professor New York College of Pharmacy.
Torald Sollmann, M.D., Professor of Pharmacy, Western Reserve University.
H. C. Wood, Jr., M.D., Pharmacologist; Professor Pharmacy and Therapeutics, Medico-Chirurgical College, Philadelphia.

The executive committee consists of:

S. Solis-Cohen, M.D., Professor of Clinical Medicine, Jefferson Medical College, Philadelphia.
Torald Sollmann, M.D., Professor of Pharmacy, Western Reserve University.
J. F. Anderson, M.D., Hygienic Laboratory, Washington.
Henry Kraemer, Ph.D., Professor of Botany, Philadelphia College of Pharmacy.
Charles H. LaWall, Ph.D., Pharmacist and consulting chemist; Professor Philadelphia College of Pharmacy.
George D. Rosengarten, Ph.D., Chemist, a member of the firm of Powers-Weightman-Rosengarten Co., Manufacturing Chemists.
A. B. Stevens, Ph.D., Pharmacist; Professor School of Pharmacy, University of Michigan.
H. W. Wiley, M.D., Ph.D., Chemist; ex-Chief Bureau of Chemistry, Washington.
G. M. Beringer, Ph.M., Pharmacist in retail business.
C. L. Diehl, Ph.M., Pharmacist (retired); Emeritus Professor Louisville College of Pharmacy.
W. C. Alpers, Sc.D., Pharmacist in retail business.
Otto Raubenheimer, Ph.G., Pharmacist in retail business; Editor Practical Druggist.
Wilhelm Bodemann, Ph.G., Pharmacist in retail business.
A. B. Lyons, A.B., M.D., Pharmacist; Chemist with Nelson, Baker & Co., Manufacturing Chemists.
Chas. Caspari, Jr., Phar. D., Pharmacist; Professor University of Maryland; Commissioner Maryland State Board of Health.

252 York Street.

BUBONIC PLAGUE IN MANILA

A. P. GOFF, M.D.
Chief, San Lazaro Hospitals Division, Bureau of Health; President Board of Medical Examiners for the Philippine Islands; Visiting Physician, Philippine General Hospital
MANILA, P. I.

After an absence of six years plague again appeared in Manila in June, 1912. Between that date and the present—March, 1913—there have been fifty-five cases, twenty-two of them having occurred in October.

The way in which the disease entered Manila is not known certainly, but as there had been a good deal of plague in China for some time before June, 1912, it is presumed that an infected rat came ashore from some boat from the mainland. It is impossible to guard against this danger absolutely.

In the rat-poisoning and rat-catching operations which have been carried on, remarkably few infected animals have been found, which of course accounts for the comparatively few human cases reported, and leads to the belief that no serious epidemic will occur in Manila.

All of the cases, except two in the Walled City (Intramuros), have been on the north side of the Pasig River, which divides the city; and nearly all of the twenty-two, mentioned as occurring in October, originated in an infected store-house near the station of the Manila and Dagupan Railroad. This was, of course, at once thoroughly disinfected and cleared of rats, and since then no more cases have occurred in that neighborhood. It might be mentioned, in this connection, that arsenic mixed with rice in such proportion that a few grains of rice constitute a poisonous dose, is considered here to be the best rat-poison.

According to nationality the fifty-five cases were divided as follows: in Filipinos forty-six, Chinese eight and Caucasians one. Only ten females were attacked, and the ages of all patients varied from 16 months to 50 years; about one-half being 25 years of age or under.

According to the population the number of cases was somewhat greater among the Chinese than among the Filipinos, and among the Caucasians somewhat less than the due proportion; we all were struck by the number of comparatively young people attacked. It is not known why this should be so, unless it is, perhaps, that the younger persons are rather more liable to go barefooted, thus giving the fleas a better chance.

All cases of plague are handled at this hospital—San Lazaro—and every diagnosis is confirmed by laboratory methods, or by post-mortem, or both. When a case is admitted, the bubo, if there be one, is aspirated, and a smear examined at once, by which means the diagnosis in typical cases is usually confirmed. Of course a culture is also made, and guinea-pigs inoculated. This is done by the government laboratory. This work of the laboratory is particularly useful, from a practical standpoint, in doubtful cases of enlarged lymph-nodes. Many cases were sent here as suspected bubonic plague, with enlarged lymph-nodes, high temperature, etc., which were not plague, but were called by us "glandular fever." It is practically impossible to be sure of the diagnosis in these instances, for a day or two, and here the microscope is particularly valuable as giving, at least, negative evidence. Of course these cases of enlarged lymph-nodes did not closely simulate typical plague clinically except in, perhaps, two cases; but many cases of true plague are not typical. For instance:

A male Filipino 18 years of age was admitted with a temperature of 104, and slight enlargement of the lymph-nodes in the left axilla. A lymph-node was aspirated and nothing was found indicative of plague in the smear or culture. The patient was given quinin and calomel and the temperature became normal on the day after admission and remained practically so for two days. On the fourth day, however, the temperature rose again to 104, and a second aspiration of the lymph-node showed the case to be plague both in smear, culture and guinea-pigs. The temperature declined again in a few days, and the patient recovered.

This case was, of course, bubonic plague in a mild form, but there was nothing at first to differentiate it from some of the cases admitted which were not plague, as for example the following:

A Filipino child 4 years old was brought in with a temperature of 104, and a large left femoral bubo. The lymph-node was aspirated repeatedly, but nothing could be found in smear, culture or pigs. There was no infection of foot or leg to account for the bubo, and according to the mother there had been fever for some days before the lymph-node enlarged.

These two cases are briefly mentioned merely to show the occasional difficulties encountered, and the value of laboratory methods in this disease.

In the cases observed since June, 1912, the femoral lymph-nodes have been oftenest primarily enlarged, followed in frequency by the inguinal; in two cases the popliteal lymph-nodes were affected, in three the cervical, and in three the axillary. In only two cases has there been any skin eruption. Three or four cases developed bloody expectoration due to secondary involvement and congestion of the lungs. Specimens of sputum were found to contain immense numbers of the plague bacillus. These cases were, of course, in no way genuine pneumonic plague, all of ours having been of the bubonic type; but as there was usually more or less coughing, every person going near these patients was compelled to wear a mask of absorbent cotton, between double layers of gauze, over the nose and mouth. In addition, when practicable, a light towel or piece of gauze was thrown over the patient's face when it was necessary for any one to remain near him for any length of time. When individuals reach this stage they are usually practically unconscious, so that a light covering over the face causes no annoyance.

In this country, where it is possible for all rooms to be open and well ventilated, it is not likely that the danger to attendants from infected sputum is as great as in Northern China in the winter, for instance, but it must at all times be considerable. No accidents resulted from the few cases occurring here. These cases showed at post-mortem intense congestion of the lungs with involvement of the bronchial glands. At the necropsies of those having femoral or inguinal buboes, even when the lymph-nodes were not greatly enlarged, the distance to which hemorrhage and congestion extended into the abdomen, involving the posterior wall, was particularly remarked.

It might be of interest to note that a cat was found suffering from plague, and that guinea-pigs left in houses from which patients had been taken were infected.

Patients are being treated with serum prepared at the Government Laboratory; about 150 c.c. being given by intramuscular injection as an initial dose, and from 50 to 75 c.c. three or four times a day until 500 c.c. have been administered. This treatment has not been used a sufficient length of time to make any positive statement as to results possible, but it is believed that the serum has a beneficial effect.

As to mortality, twenty-one of the fifty-five patients were found dead and removed to the morgue, and thirty-four were found alive and transferred to the hospital. Of these seven recovered: one Caucasian, five Filipinos, and one Chinaman. This makes the number of cured about 20 per cent. of those found living, and 12½ per cent. of all, which is considered to be a fairly good result when it is remembered that many patients were admitted in a dying condition, and when the general severity of the disease is taken into account.

At this writing the prospect for getting rid of the plague entirely appears to be good, as there have been no cases since the first of the month.

The Pasig River flows through the center of the city. A large part of the white population live in Ermita, Malate and Paco, or the south side, while the north side, particularly Tondo, Binondo, San Nicolas, Santa Cruz and Quiapo, is mostly occupied by natives. Intramuros is the old Spanish walled city.

The first case of plague, June 18, 1912, was in Tondo, near the railroad station; the second, June 26, in Santa Cruz, not far from Bilibid prison; the third, August 4, in Quiapo; the fourth, August 8, also in Quiapo; the fifth, August 11, in Binondo, and so on. Thus they were pretty well scattered around the north side. In October occurred the cases originating in the store-house near the railroad station, and also one case in Paco on the south side of the Pasig River which was undoubtedly contracted in Quiapo, Santa Cruz. In November and December there were two cases in Intramuros. The last case, March 6, 1913, occurred in Sampaloc. All patients living and dead are sent to the San Lazaro Hospital, and the morgue attached to that institution, in the northern part of the city.

A NEW TONSIL-SNARE

LOUIS D. GREEN, M.D.
AND
AARON S. GREEN, M.D.
Assistant in Ophthalmology, Stanford University Medical Department
SAN FRANCISCO

It is without trepidation that we place before the profession a new tonsil-snare. While it is true that accuracy in marksmanship depends largely on "the man behind the gun," nevertheless, the modern rifle will hit the target more frequently than would the ancient musket. Likewise, while the skilful surgeon can perform an operation with instruments that are far from mechanically desirable, he can perform the same operation better and with greater facility with a more suitable instrument.

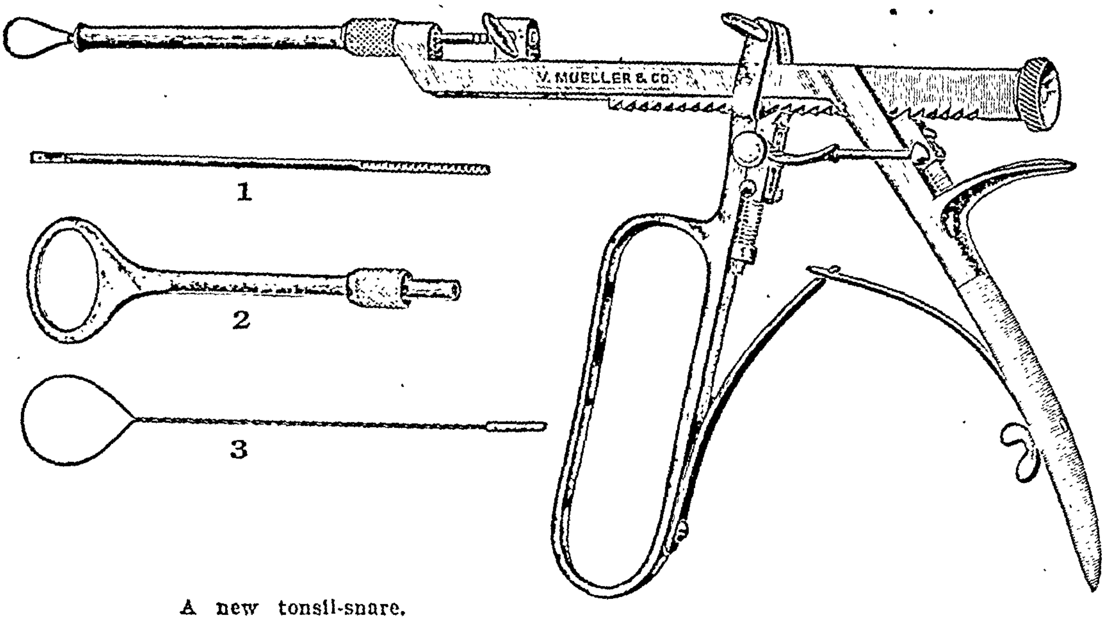
That the tonsil-snares now on the market are not altogether satisfactory is proved by the existence of the many varieties. The instrument which requires the least time and the fewest assistants in its manipulation is the most desirable.

The straight-line snares like the Farlow or Martin, and the numerous modifications, are perhaps the least satisfactory. Not being made on the lever principle, they depend on direct traction, which is usually augmented by a screw device. If the screw is used, it entails an extra step in the procedure and ordinarily requires a third hand to retain hold of the tonsil, as the operator's hands are both engaged with the snare.

The pistol-handle snares of the Tyding or Peters style overcome the above objections and are becoming increasingly popular. But, while they possess the advantages of speed and the use of only one hand in their manipulation, they have the following distinct disadvantages:

1. Slow snaring is impossible should one have occasion and desire to use that method.

2. The wire loop and cannula travel forward and down when the handles are closed to bring the loop home. This is apt to cause damage to the posterior pillar or dislodge the wire from the tonsil.



A new tonsil-snare.

3. On account of the augmented force, it is difficult or impossible to stop when once traction is begun, with the consequence that a part of the pillar or uvula is liable to be caught in the loop and cut off.

4. Should the loop happen to be too large and the tonsil not detached after bringing the handles entirely together, it places one in a very serious predicament. The ends of the wire are inside of the cannula and not accessible and it is with the greatest difficulty detached from the tonsil. This situation is especially dreadful when the operation is done under a local anesthetic, with the patient gagging and bleeding.

All of the foregoing objections we have overcome in the instrument shown in the illustration.

1. Rapid or slow snaring can be done at will.

2. The cannula remains stationary. This prevents injury to the posterior pillar and partial removal of tonsil on account of slipping of the wire loop.

3. Because of the ratchet, one can stop at any point in the operation to make sure the pillar and uvula are free.

4. Should the loop happen to be too large and the tonsil not quite snared off, it can be very easily disengaged from the tonsil by loosening the thumb-screw and pulling out the stylet.

Other features not possessed by any other snare are that it can be used in any one of three distinct methods: (1) as a short wire snare; (2) by fastening a long wire with a thumb-screw to the carrying rod; (3) by changing the tip for the Sluder-Beck operation.

The instrument, besides being less clumsy than the other scissor-handle snares, has from five to seven times the leverage of those instruments and the tonsil comes out without a sudden jerk.

NEW TONSIL CLAMPS

Mark D. Stevenson, M.D., Akron, Ohio

A clamp for one tonsil should be easily applied or removed; it should be self-retaining, and as light as possible, so that when the end outside the mouth is not supported no undue pressure or pain will result. Experience soon teaches any one using clamps that only slight pressure is required to stop a hemorrhage from the tonsillar fossae, and the pressure needs to be continued for but a short time — just long enough after the bleeding has ceased to make certain that firm clots have been formed in the bleeding vessels. This will necessarily vary in different cases, but the average case can be controlled by slight pressure for five minutes. Too much pressure continued for half hour or more causes not only unnecessary pain and distress but is likely to produce necrosis and possibly phlebitis or thrombophlebitis with subsequent emboli or other undesirable sequences. This instrument (Fig. 1) is made light and springy so that with it the danger of making superfluous pressure is much lessened. It may be left unsupported in the mouth, for the time required, causing little or no distress. If necessary it can be applied to the fossa of the first tonsil removed while the second tonsil is being operated on, or in after-hemorrhage if one fossa only is bleeding and it is known which one, the clamp can be applied to that fossa.

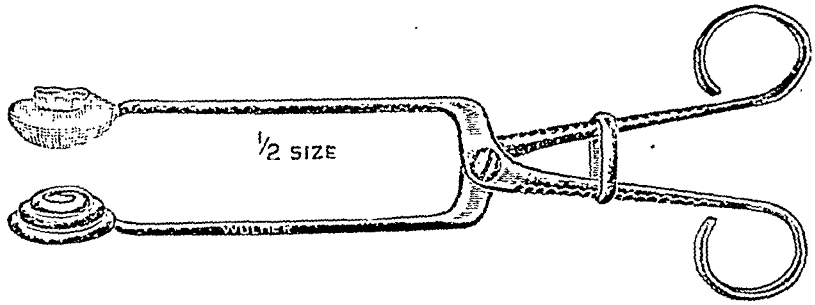


Fig. 1.—Clamp for control of hemorrhage from excised tonsils; can be applied to either side.

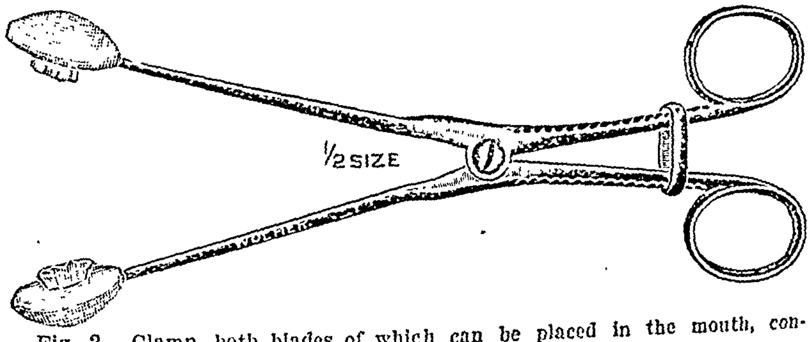


Fig. 2.—Clamp, both blades of which can be placed in the mouth, constricting by pressure outward.

If both are bleeding or it is not known which one is the offender two clamps may be employed. In such cases a clamp (Fig. 2) both blades of which can be inserted inside the mouth pressing outward against each fossa is sometimes preferable, as it requires less room and does not make so much pressure when unsupported as two, and does not clamp the external tissues overlying the tonsillar fossae, therefore being less likely to produce necrosis, etc. The parts to press against the tonsillar fossae are preferably covered with gauze, a few layers of which may be tied on the tips with any suture material or cord.

The ring on the handles of each variety is easily adjusted to give any desired pressure. A springy tension is less painful than the steady pressure of a stiff instrument, is more effective and not so likely to produce untoward pressure, necrosis or other undesirable sequelae. After the bleeding has ceased, I usually loosen the ring on the handles, doing away with all pressure on the tissues but leaving the instrument in place. The gauze tampon tends to remain in the fossa and may be left there for half an hour or longer. The patient can expectorate with the instrument in place and is not seriously inconvenienced by its presence. When such a clamp is removed the outer part should be loosened first; next the inner blade should be moved away from one fossa toward the opposite fossa and then out of the mouth. If drawn directly forward out of the fossa it is more likely to disturb the tissues and start a fresh hemorrhage.

165 East Market Street.

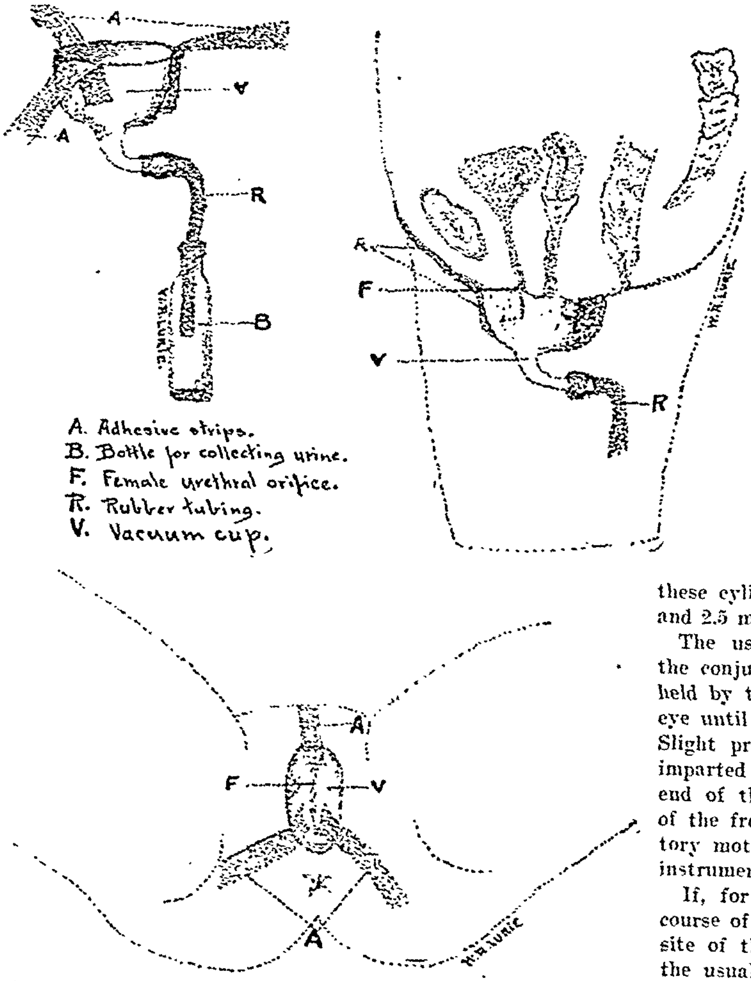
COLLECTION OF URINE FROM FEMALE BABIES

William A. Lurie, M.D., Chicago

Having experienced some difficulty in the collection of urine from female baby patients, I decided that if I had any success I would let others know and I now wish to describe a simple method which has proved satisfactory in my hands.

I strapped a narrow cup from my cupping outfit to the abdomen and over the buttocks of my little patient in such a manner that the margins were in close approximation to the vulva. To the opposite end of the cup I attached a bit of rubber tubing, the other end of which was in a bottle which was either strapped to the patient's leg or left in the bed. I found that this simple device was satisfactory and required no watching.

5108 Wentworth Avenue.



Device for collection of urine from female babies.

NEW SCLERAL TREPHINE

Harry S. Gradle, M.D., Chicago

Elliot's trephining operation has proved of wonderful service in glaucoma and is now one of the recognized procedures in combating that disease. The technic is simple and the results are equally satisfactory compared with those following iridectomy. Moreover, there is but a minimum of optical disfigurement. The main objections are mechanical and can be attributed to the trephine itself. The hand trephine is difficult to steady and keep in the original incision while applying proper downward pressure and rotary motion. The watch-spring type of corneal trephine cannot be controlled accurately, and the small set-screws, for adjusting the cutting points, are apt to catch the conjunctival flap and badly lacerate it.

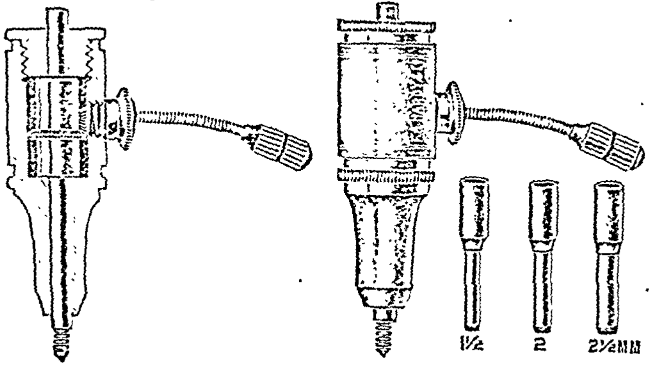


Fig. 1.—Cross-section of trephine. Fig. 2.—Trephine, with knives.

Therefore I devised the trephine herewith illustrated: A shaft, rotating freely within a rigid housing, is actuated by a flexible shaft at right angles to the main shaft and connected with it by a simple rack-and-pinion bearing. (Fig. 1). The free end of the flexible shaft terminates in a small knurled head that is rotated between the operator's thumb and forefinger. The lower end of the main shaft is threaded and onto this are screwed the cutting edges of the trephine. There are three of these cylindrical knives, with the relative diameters of 1.5, 2 and 2.5 mm. (Fig. 2).

The use of the instrument is extremely simple. After the conjunctival flap has been dissected free, the trephine is held by the rigid housing in one hand and lowered onto the eye until the proper site for the cutting has been determined. Slight pressure is then brought to bear. Rotary motion is imparted to the cutting edge by gently turning the knurled end of the flexible shaft between the thumb and forefinger of the free hand. This obviates the possibility of any vibratory motion being transmitted to the cutting portion of the instrument.

If, for any reason, the operator wishes to interrupt the course of the operation, the trephine is easily returned to the site of the original incision and the trephining continues in the usual manner.

1337 Fargo Avenue.

Special Article

BACTERIAL VACCINE THERAPY: ITS INDICATIONS AND LIMITATIONS *

(Concluded from page 1956)

X

Puerperal Infection: In those cases of childbed fever with streptococci as the predominating organisms inoculation of a stock vaccine of the corresponding microbe has at times been followed by symptomatic betterment. Many obstetricians, however, believe that the antistreptococcic serum brings better results than vaccine in this disease. In any case a careful bacteriologic diagnosis of organisms found in the interior of the uterus should be made. In severe cases it is also desirable that a culture be obtained of organisms from the blood.

A minority of the infections of the puerperium, comprising, however, a goodly proportion, arise from invasion by the pneumococcus, colon bacillus, staphylococcus, gonococcus and anaerobes of the *Bacillus aerogenes capsulatus* (Welch) type. These infections obviously are unsuited for streptococcic inoculations, and one should not jeopardize a possible satisfactory outcome by relying on them or on one of the several mixed vaccines advertised for an emergency of so serious a nature.

Erysipelas: Streptococcus vaccine is rarely if ever of benefit in erysipelas. Some bacteriotherapeutists have presented clinical statistics to demonstrate the value of a stock vaccine made from a special strain of streptococci isolated from erysipelas, and others record similar experience following the use of autogenous vaccines for each individual case. On the whole, however, the vaccine treatment of acute erysipelas is of uncertain promise. In the chronic recurrent type of infection the prospects are more encouraging for the use of stock vaccines of erysipelatous cocci, or better still the autogenous vaccines.

Scarlet Fever: The routine employment of streptococcus vaccines in scarlet fever is not advisable. For the streptococcic complications and sequels, such as abscesses, beneficial results may at times be secured by autogenous vaccines.

In certain quarters prophylactic inoculations of streptococcus vaccine are advocated as of value in scarlatina, the statement being made that complete immunity is to be secured in a week following three inoculations of streptococcus vaccine from five to seven days apart. To say the least, such a statement seems unwarranted in view of the still undetermined etiology of scarlatina and of the part played by streptococcus infections in that malady.

Localized Infections: In such affections as streptococcus angina and adenitis following milk infection, autogenous vaccine therapy has been advocated; and the same consideration applies to other localized infections of which otitis media may be taken as a type.

Acute and Chronic Rheumatism: Certain makes of commercial streptococcus and staphylococcus vaccine have been prominently advertised in rheumatism. Acute, subacute and chronic "rheumatism" alike of joints, bursae, tendon sheaths, muscles and nerves are included in the list along with arthritis deformans, as having been "cured" by these vaccines. Such statements are gross exaggerations of the actual conditions, which are that a very occasional case of subacute or chronic rheumatism appears to improve from the inoculation of stock streptococcus and staphylococcus vaccine.

As for the typical "rheumatic fever," we are probably on the threshold of a definite knowledge of the peculiar and specific streptococci concerned in its etiology, and rational vaccine therapy must await the attainment of this information. Many of the rheumatoid affections of a chronic or recurrent type result from a smoldering focus of infection in the tonsils, the accessory sinuses, the middle ear and the alveoli (pyorrhea alveolaris). The task of bacteriotherapy is to identify the bacteria in such foci of infection and to treat by appropriate autogenous vaccines. The employment of vaccine therapy, however, should not lead to neglect of the proper surgical measures for the removal or drainage of the infected focus.

Surgical Prophylaxis: Vaccines, especially of streptococcus and staphylococcus, have been advocated for use preceding operation and after accidental wounds, on the theory that a protective immunity could thus be established against wound disease. There is no sufficient evidence to justify this practice.

Dosage.—From 30 to 100 million killed streptococci constitute the average dose, though occasion may arise for larger amounts, from 500 to 1000 million.

PNEUMOCOCCUS VACCINE

The organisms included under the species pneumococcus vary as to races, strains or groups much as streptococci. For specific therapeutic effects one must recognize this variation to the extent of providing for autogenous vaccines in such cases as offer promise for bacterial inoculations in event of no response to a test dose of stock vaccine. There is little evidence that stock or autogenous vaccines are of value in pneumococcic infections.

Preparation.—A stock pneumococcus vaccine should preferably have as its source a strain isolated from a case of pneumonia. It is questionable whether any advantage is secured by the effort to produce a polyvalent vaccine.

Localized Pneumococcic Infections: Since the presence of the pneumococcus in localized infections can be determined only by a bacteriologic diagnosis, the appropriate course is to follow the culture with the preparation and administration of the autogenous vaccine if the indications for it seem clear.

Dosage.—From 20 to 100 million constitute the usual therapeutic dose of devitalized pneumococci.

GONOCOCCUS VACCINE

Stock vaccines of the gonococcus, like those of the staphylococcus, fulfil a useful purpose in vaccine therapy.

Preparation.—It is customary to make a stock vaccine by using a suspension of several separate cultures differing in source, though it is problematic whether any advantage is derived by this means.

Indications.—Complications of Subacute and Chronic Gonorrhea: The localized inflammatory complications like epididymitis, balanoposthitis, vulvovaginitis of children and chronic conjunctivitis have all been treated with reported success by inoculations of stock gonococcus vaccines. The evidence seems to show, however, that the vulvovaginitis of children is not cured. The discharge may be lessened for a time but practically always breaks out again. Chronic conjunctivitis is usually curable by other means. In chronic infections of the deep urethra and the contiguous structures of the male similar treatment has been disappointing, though the prospects of a satisfactory outcome appear to be improved in cases in which autogenous vaccines of the secondarily infecting bacteria are combined with that of a stock gonococcus vaccine.

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* This series of articles has been prepared under the direction of a committee appointed for the purpose by the Council on Pharmacy and Chemistry of the American Medical Association. The committee consists of Drs. Ludvig Hektoen, Chicago; David L. Edsall, Boston; John Howland, Baltimore; Reid Hunt, Washington, D. C., and Albert P. Ohlmacher, Detroit.

Acute Gonorrheal Infections: Since these are practically always localized, they would be theoretically suited to gonococcus inoculations. The general consensus of opinion, however, is that this form of treatment does not favorably modify acute urethritis, vaginitis and ophthalmia due to the gonococcus, irrespective of whether stock or autogenous vaccines are used.

Gonorrheal Rheumatism: In subacute and chronic gonococcus infection of the joints and related structures, numerous reliable reports have attested the value of treatment with stock gonococcus vaccines. Success, however, is by no means invariable.

Dosage.—Gonococcus vaccines are administered in doses ranging from 5 to 100 million.

MENINGOCOCCUS VACCINE

For the purpose of protective immunity, especially when cerebrospinal meningitis is epidemic, a vaccine of killed meningococci in three doses of 250, 500 and 1,000 million at intervals of from five to seven days has been advocated. It is certain that such inoculations give rise to meningococcus antibodies, but the available statistics are not at present sufficient to establish the worth of this method. Similar antibodies appear in the blood after inoculation of killed gonococci, but fresh gonorrheal infections are known to have occurred in patients undergoing a course of vaccine treatment for chronic gonorrhea.

COLON BACILLUS VACCINE

Subjected to the differential tests of the bacteriologic laboratory, pathogenic colon bacilli constitute a group of organisms with a few common morphologic and physiologic features which permit classifying them as a species. The common bacterium of the feces in normal mammals, *B. coli communis,* is the type, and this is generally chosen as the source of a stock bacterial vaccine. But the colon bacilli encountered under morbid conditions vary more or less widely from this type. It comes to pass that we have in certain enteric infections, or in the fevers accompanying infections of the bowels, a series of coliform strains, of which the paracolon bacilli and the several dysentery bacilli may be cited as illustrations; while in abscesses the variation may lead to the strains of which *B. pyogenes foetidus* is an example. It follows from this variation that specific therapeutic effects in colon bacillus infections are rarely secured by the use of stock vaccines. Hence the recommendations to employ the commercial product in conditions like "jaundice," gall-bladder infection, appendicitis, peritonitis, pyelitis, rectal abscess, fistula in ano, enteritis, subphrenic and hepatic abscesses and postoperative abdominal fistulas are absurd, and one who follows them is resorting to dangerous temporizing. In this list are infections with other bacterial species, or those in which colon bacillus infection is complicated or mixed. Organisms are not obtainable in most of these conditions and some of them are unsuited to bacterial therapy, but those which have a reasonable claim for consideration from this point of view are appropriately handled only by the use of autogenous vaccines.

Perhaps it is because of the falling short of stock colon bacillus vaccines that so many of the mixed vaccines of commerce contain it. In any event, there is no propriety in administering stock colon bacillus vaccine. It should be dropped from the list of stock vaccines.

TYPHOID BACILLUS VACCINE

Preparation.—As called for in protective antityphoid inoculation, a culture kept under laboratory conditions for some time is more appropriate as the source of a vaccine. It is probably superfluous to attempt a polyvalence for such a stock vaccine by using a number of cultures from different sources. This certainly applies to the vaccine for prophylaxis, and there is no proof of the superiority of a polyvalent vaccine in typhoid therapy.

Indications.—Antityphoid Inoculation: Inoculation of typhoid bacillus vaccine designed to confer a temporary protective immunity to typhoid has been widely adopted of late, and on the whole the testimony is favorable to the practice. Accordingly, we here have the most legitimate field for the administration of a stock bacterial vaccine, and it is a sign of hopeful import to find non-commercial laboratories like those of the Army, Navy and boards of health manufacturing and supplying this product for free distribution.

At present it is customary to perform three inoculations at intervals of from seven to ten days with the object of securing a full protection.

Typhoid Fever: The practice of resorting to inoculations of stock typhoid bacillus vaccine as a routine in typhoid is growing, and some observers insist that the clinical course of the disease is favorably modified to such an extent as to warrant the general adoption of the method. Others testify in favor of autogenous vaccine therapy with bacilli obtained from the patient's blood.

The use of vaccines in the treatment of typhoid fever constitutes an extension of the practice of bacteriotherapy for which no basis is afforded by our present notions of the action of these agents. In this connection the fallacious conclusions that have been drawn by clinicians as to the therapeutic value of other supposed remedies in this disease, should be borne in mind.

Typhoidal Complications and Sequels: Whatever may be the judgment relative to the value of vaccine treatment in typhoid fever, there is practical unanimity among bacteriotherapeutists as to the benefits of autogenous vaccines in treating such posttyphoidal affections as those of the bones, joints, gall-bladder and abscesses in conjunction with appropriate operative measures.

Dosage.—For purposes of protective immunity, the most recent advice is to inoculate three doses of stock typhoid vaccine, the first of 500 million and the others of 1,000 million each. The therapeutic dose is less firmly established, and varies from 50 to 1,000 million according to the experience of different authorities.

CONCLUSIONS

Vaccine therapy is a highly specialized field of medicine whose successful pursuit calls for a particular training in bacteriology, immunology and clinical medicine.

The therapeutic possibilities of vaccine therapy have been exaggerated.

The promiscuous use of the stock bacterial vaccines of commerce in the treatment of acute and chronic infections is an irrational procedure.

Ready-mixed commercial vaccines should be abolished.

In cases suitable for bacterial therapy, autogenous vaccines are with few exceptions superior.

Autogenous vaccines should be prepared by those in touch with the patient and not through the agency of remote laboratories.

The End

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DIET AND THE ACTION OF DRUGS

On several occasions we have discussed some of the accessory factors in diet, drawing illustrations from recent work on beriberi and on growth and other processes.[1] The researches on these and other subjects have shown that there are present in foods unknown substances which, often in minute amounts, have pronounced effects on growth and other metabolic processes out of all proportion to their dynamic value. These results also show the fallacy of measuring food values solely by calories.

No less striking are the effects of unknown constituents of foods on the resistance of animals (and doubtless of man) to certain poisons. Thus Hunt[2] found that in some cases mice fed on certain diets recovered from forty times the dose of certain poisons fatal to mice fed on other diets; he found it possible to alter at will the resistance of these animals and to overcome the effect of one diet by combining it with others. In a later paper[3] he reported that the size of the thyroid in mice could be altered by changes in the diet, and brought forward some evidence to show that the effects of foods on the resistance of the animals to certain poisons were exerted in part, but only in part, through alterations in the thyroid gland.

One of the poisons with which Hunt worked was morphin; he found that in most cases this drug was much more toxic to mice which had been kept on a milk diet than to those kept on many other foods. These results are of interest in connection with some later observations of Döbeli,[4] who found morphin and opium to be more than twice as toxic to suckling rabbits as to young non-suckling rabbits; there was no such difference in the case of codein. Döbeli carefully reviewed the literature on the use of opium and morphin in infancy and, although recognizing the difficulties of drawing conclusions from observations on individuals who are for the most part abnormal, concluded that the same law holds for infants; that is, it is only during the nursing period that infants are especially sensitive to morphin. As a result of these and further studies Döbeli has suggested[5] the following dosage of morphin for infants: divide the usual dose for an adult of from 65 to 70 kg. (from 143 to 154 pounds avoirdupois) by the quotient obtained by dividing the weight of the adult by the weight of the child; but for nurslings under 10 months reduce the dose so obtained by one half. He says that in the case of codein this additional reduction during the nursing period is not necessary; the dose may be based directly on the weight of the infant as compared with that of the adult.

Döbeli is uncertain whether or not the sensitiveness of the nursling is to be attributed directly to the milk diet; nor does he discuss the question whether or not infants receiving cow's milk as the only food show a similar sensitiveness; but in the present state of knowledge it might be well to apply the formula for the dosage of morphin to all infants receiving an exclusive milk diet.

A number of other illustrations of a relation between the diet and the action of drugs might be cited. Thus Ellinger several years ago found cantharidin to be relatively innocuous to rabbits fed on carrots, although causing a severe nephritis in rabbits fed on oats, the difference being due to the fact that the former diet caused the urine to be intensely alkaline—a condition unfavorable to the development of cantharidin nephritis. The possible bearing of observations of this sort on the development in man of nephritis resulting from toxic substances is obvious.

That an article of diet like "white wheat bread" may show such variations in composition as markedly to affect the resistance of animals (and doubtless of human beings) to certain poisons was also shown by Hunt: mice fed on the bread of one baker were four times as sensitive to certain poisons as mice fed on the bread of another baker; dealers in bread considered the two brands to be the same. The cause of this difference was not determined; it may have been due to comparatively simple differences in methods of manufacture (differences in the amount or kind of fat, milk, salt, etc., employed). In this connection attention may be called to a recent paper by Javal[6] in which he points out that the salt content of different makes of French bread may vary from 0.1 to 10 gm. per kilogram, and that such variations may have a distinct influence on the effects of bromids and iodids administered for therapeutic purposes.

These instances show that many factors which have hitherto not been considered in connection with drug therapeutics may have considerable importance, and again illustrate the need of a more thorough investigation of such supposedly well-studied articles of food as milk and bread and of such drugs as morphin and the bromids.

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[1] See references in Unintentional Humor in Science, editorial, The Journal A. M. A., May 24, 1913, p. 1642.

[2] Hunt, Reid: Bull. 69, Hyg. Lab., U. S. P. H. S., 1910.

[3] Hunt, Reid: Experiments on the Relation of the Thyroid to Diet, The Journal A. M. A., Sept. 23, 1911, p. 1032.

[4] Döbeli, E.: Monatschr. f. Kinderh., orig., 1911, ix, 397; Correspondenz-Bl. f. schweiz. Aerzte, 1911, xli, No. 4; abstr., The Journal A. M. A., March 11, 1911, p. 783.

[5] Döbeli, E.: Correspondenz-Bl. f. schweiz. Aerzte, 1912, xl, 430.

[6] Javal: Bull. gén. de thérap., 1912, clxiv, 868.

THE PULSE-RATE AND METABOLISM

An increase in pulse-rate is commonly looked on as an indication of increased work of the heart. This interpretation is, strictly speaking, correct. But there are other factors, more remote than the transactions in which the cardiac musculature alone is involved, that call for acceleration of the heart-rate. Increased metabolism, wherever it may go on, makes augmented demands on the circulatory system, so that it may well be asked whether an increased pulse-rate can in any way be taken as an index of the metabolic changes in general occurring in the organism. Drs. Benedict and Joslin[1] of Boston have lately pointed out that there is a distinct tendency toward an increased pulse-rate in diabetics. This is in conformity with the increased metabolism which these investigators regard as characteristic of the disease. They point out that the intimate relationship between pulse-rate and metabolism is increasingly evident in every new publication on metabolism, and shows that to-day pulse-rate is taking on new significance. While an increased pulse-rate is invariably accompanied by an increased metabolism, this does not necessarily mean that the increased metabolism is due exclusively to the work of the heart. In fact, from what is known of the work of this organ, probably only a very small proportion of the total increase can properly be ascribed to its actual muscular action. It is likely that the increased pulse-rate is an excellent index of general tonus. Unquestionably, as Benedict and Joslin point out, during increased metabolism and increased pulse-rate, there is some tendency toward an increased respiration-rate; but here again the increased work of the respiratory muscles in connection with the greater activity of the heart can account for only a small quota of the total increase in metabolism.

The average minimum pulse-rate of normal individuals is 54, the maximum 74; for diabetic subjects the newer findings are 65 and 81, respectively. These data were not obtained by the usual cursory examination. The popular conception of a normal pulse-rate is the observation made under all sorts of environmental conditions, usually in the excitement incident to consulting a physician and after the muscular exercise involved in walking. The Boston investigators insist that to obtain a true normal value the observation should be made under conditions which would insure its being unaffected by food, exercise or mental stimulus of any kind. This is possible with the subject lying quietly in bed without food, as happened in all the cases in which Benedict and Joslin reported the pulse-rate.

The current opinion that the fluctuations in the pulse-rate of diabetic subjects remain within normal limits rests on negative evidence. Little attention is ordinarily paid clinically to the pulse-rate in chronic afebrile diseases of a non-circulatory type. It is quite possible, however, that the matter deserves closer attention. If the pulse-rate, properly observed, is in any way an index of metabolism changes in general, we may join Benedict and Joslin in emphasizing the importance of the pulse-rate in diabetes, and particularly the value of changes in pulse-rate in the same patient during the progress of the disease.

LIFE CONSERVATION

The paradox has been well put that the most precious thing is the cheapest—in money; while the most useless thing is the dearest—in dollars and cents. The cost of killing a man in modern warfare averages $15,000; in the Boer War it was $40,000. The six great European powers are grinding two billions of dollars out of their respective peoples for military preparations—not for war, it is said, but to prevent war! Meanwhile millions of young men who should be engaged in industrial pursuits are maintained in utterly unprofitable idleness, and are quartered, it is declared, in inadequate and sometimes tuberculosis-ridden barracks. On the other hand, Colonel Gorgas and his associates have converted the formerly pestilent and deadly Isthmus of Panama into one of the healthiest regions on earth, at a cost of $2.43 for each life saved. Many hundreds of men, women and children in our South have been cured of the hookworm disease at an average cost of 77 cents for each sufferer. It is indeed true that the most precious thing in nature is human life (and human health by which life is enjoyed and lengthened), and as we have seen, it is about the cheapest; while the most useless and foolish thing is human warfare, which is the most costly.

Irrationality akin to that evinced in Europe—though not so flagrant—has been shown by our House Committee on Indian Affairs in refusing the request of the Secretary of the Interior for adequate funds with which to do hospital sanitation and medical work among the "nation's wards." The appropriation has been $90,000; but investigation revealed conditions much worse than had been supposed. The death-rate from pulmonary tuberculosis in the federal registration area is 11; among the Indians it is 32, while the death-rate of the latter from all causes is 30, or more than double that in the registration area. On ascertaining these facts Secretary Fisher in his annual report recommended that the appropriation for prevention and treatment of disease be increased to $400,000; but the members of our billion-dollar Congress (which had just voted millions to be added to those already given in pensions) balked at such expenditure in behalf of a people for whose welfare our government has very largely assumed the responsibility and whose diseases are constantly endangering their white neighbors.

The conservation of health is perhaps the most important idea which the twentieth century has thus far evolved. Irving Fisher computed that the span of life in the United States could be increased fifteen years if all the hygienic reforms now known were put into effect, and outlined a plan for better health protection by federal, state and municipal governments, with the cooperation of many agencies and movements now benignantly active for the betterment of sanitary and hygienic conditions among our people. The life-insurance companies have taken admirable part, and have conceived a policy of enlightened selfishness, based on the fact that the longer the policy-holder lives, the more premiums he will pay.[1] Mr. Cox of New York, the counsel of the Association of Life-Insurance Presidents, states that out of a total of nearly thirty million policies in force in American companies at the end of 1910, the companies in this association carry about 77 per cent. (or over twenty-three million), and of the latter, 97 per cent. are in companies now engaged in individual work for health improvement. Five companies within this association (having policies aggregating $22,000,000) make special efforts to stimulate their policy-holders to activities in personal and public hygiene—mostly by articles in company periodicals distributed to policy-holders and by other effective literature. One company has done this for many years. Another cooperates besides with existing antituberculosis and like agencies, for health improvement; this company is experimenting in many cities with visiting nurses to sick policy-holders. Another company has established a department of conservation which is ambitious, among other things, to aid public-health authorities in the fight against preventable disease. This is a tremendous activity indeed, and with plenty of material to work on; for actuaries have estimated that the economic value of lives lost needlessly each year in the United States alone is $1,500,000,000.

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[1] Benedict, F. G., and Joslin, E. P.: Metabolism in Severe Diabetes, Carnegie Institution of Washington, Pub. 176, p. 85, 1912.

WASTE PRODUCTS IN THE BLOOD

The theories of the cause of the severe symptoms and frequent fatal intoxications which may arise when the outflow of urine is quantitatively or qualitatively altered for any considerable period of time have overstepped the facts which are at present available to support them. Accordingly the widely used term "uremia" has become little more than the inadequate expression for a series of manifestations with which is associated a mass of more or less shattered hypotheses. Retention has been the key-note in the discussions on the subject; but whether the toxic factor retained in the circulation is a normal product of metabolism ordinarily eliminated speedily by the properly functioning kidneys, or whether it is an intermediate compound representing incomplete metabolism; whether it is nitrogenous or non-nitrogenous, organic or inorganic, or several combined—these have been questions for debate.

It is useless to continue an idle war of words when substantial facts on which to build a structure of some permanence can be procured. The study of the urine has been relied on largely, if not exclusively, in the past to give the clue to the retarded elimination. It requires little insight to appreciate that a comparison of the chemical composition of the circulating blood in normal health and in supposed instances of uremia or defective elimination by the kidneys is likely to give even better insight into the detrimental conditions. Recently obtained figures for non-protein nitrogen and urea nitrogen in normal human blood indicate between 22 and 26 mg. for the former, and for the latter from 11 to 13 mg. per hundred grams of blood.[1] From this remarkable narrowness in the range of variation it would seem that the perfectly normal kidney maintains a surprisingly constant level of non-protein nitrogen and urea in the blood, as it does of sugar. The figures for uric acid are far more variable. If they are put at from 1 to 2 mg. it appears that this is distinctly larger than the content of the blood of other mammals. The now well-appreciated exceptional position of man in respect to uric acid metabolism is thus again sharply emphasized.

Folin and Denis state that a "perfectly normal kidney" appears to be the exception rather than the rule as soon as one leaves the thoroughly healthy adults and examines any kind of "clinical material." Evidences of impaired kidney efficiency come plainly to light. The blood of chronic nephritis patients always gives high figures. Inasmuch as some of the cases of recognized nephritis carry no greater accumulation of waste nitrogen in the blood than was found in a series of patients afflicted with syphilis or insanity, it becomes a question of interest whether the blood-analysis test will not hereafter serve as a better index of incipient nephritis than the conventional clinical diagnostic symptoms.

Clinicians have long maintained that gout and general kidney inefficiency need not go hand in hand. Folin and Denis have now shown that there is apparently no relation between the amount of urea or other non-protein nitrogen and uric acid in human blood. A typical "uric acid blood" may be found without any evidence of the retention of other nitrogenous compounds. Since normal human blood contains some uric acid and the latter is apparently not so readily destroyed in the normal organism as is commonly assumed, it is quite possible that a damage to the kidney sufficient to provoke the retention of uric acid and the development of gout may be too slight to affect the excretion of other more soluble products. In any event the modern investigation of the accumulation of waste products in the blood in disease is carrying us nearer to the real seat of the difficulty. It is in line with the refinement of diagnostic skill in other directions whereby incipient or latent nephritis may be earlier detected and defects of elimination as well as metabolism more adequately recognized. If each waste product actually tells a distinct story, great progress may be looked for. Meanwhile theories must bide their time.

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[1] Cox, R. L.: Conservation of Human Life, *reprinted from* The Business of Insurance by the Association of Life-Insurance Presidents.

[1] These and other data quoted are taken from Folin, O., and Denis, W.: Uric Acid, Urea and Total Non-Protein Nitrogen in Human Blood, Jour. Biol. Chem., 1913, xiv, 29.

BEHRING'S NEW METHOD OF INOCULATION AGAINST DIPHTHERIA

While the curative treatment of diphtheria with diphtheria antitoxin constitutes one of the great triumphs of modern medicine, our present methods of prevention of diphtheria are admittedly far from satisfactory. Diphtheria antitoxin acts by neutralizing the toxin which causes the principal effects of infection with diphtheria bacilli and in the meantime the bacilli are destroyed more or less successfully by the usual means of defense against invading bacteria. But the use of diphtheria antitoxin for preventive purposes is not a practical success because the antitoxin is eliminated too rapidly, as it is part and parcel of the proteins of a foreign serum which are soon destroyed when introduced into the human body. For this reason the passive immunity from diphtheria antitoxin in horse-serum lasts from two to three weeks only. Under ordinary conditions the frequent injection of antitoxic serum for this purpose is not practicable for several and obvious reasons.

The fundamental principle on which Behring bases his new method[1] of securing a more permanent immunity is the active immunization of the human body itself; that is, the elaboration of diphtheria antitoxin by the body of the person inoculated. This is to be accomplished by the injection of mixtures of diphtheria toxin and antitoxin that are almost neutral and, consequently, produce no toxic effects of any importance, there being present a minimal excess only of toxin. It has long been known that more or less balanced mixtures of this kind produce immunity in animals, and in 1907 Theobald Smith[2] suggested that it might be possible to employ this method to produce immunity in man. Subsequently, Smith studied the effects of injections of neutral mixtures in guinea-pigs and horses and again pointed out the applicability of the method to human beings.[3] Now Behring and his collaborators find that the injection of toxin-antitoxin mixtures in human beings does result in an accumulation in the blood of antitoxin, sometimes very large and persisting for at least several weeks. This may be accomplished without any unfavorable results. Behring believes that the immunity so produced is much more durable than the passive immunity from antidiphtheria horse-serum and also that the serum from human beings actively immunized may be used to good advantage for curative and preventive purposes, because the antitoxin will remain much longer when introduced in homologous serum.

This use of human serum has practical limitations, however, and the danger of transfer of other infectious diseases must always be borne in mind. Unquestionably a long step in advance in the method of prevention of diphtheria has been taken. It is doubtful, however, whether the ideal method has been evolved, because the procedure discussed probably does not include any factors whereby the tolerance of the diphtheria bacillus by the organism is prevented. A person might possess a high degree of active immunity to diphtheria toxin and yet harbor virulent bacilli in his throat which he would be the means of disseminating. In order to diminish as much as possible the chances for the bacilli to establish themselves in this manner it would seem desirable to increase also the active resistance of the body to the diphtheria germ, and possibly this could be accomplished by the injection with the toxin-antitoxin mixture of suitable quantities of killed bacilli or of proteins derived from them so as to produce an active antibacterial as well as antitoxic immunity. We may look forward with interest to the results of this new departure in the prevention of diphtheria.

THE INDEX

This issue of the THE JOURNAL contains the index to the current, or sixtieth, volume of THE JOURNAL, including the current medical literature which has been listed from week to week. The Index contains references to original articles in over two hundred of the leading medical journals of the world, including those of the principal foreign countries.

The Index consists of two parts—an author and a subject index. Under "Authors" appear the names of all who have contributed articles to THE JOURNAL or to any other medical journal listed in the current literature, as well as the names of those whose papers are abstracted in the medical society reports in THE JOURNAL. Under "Subjects" will be found complete references to all reading-matter in THE JOURNAL and references to the original articles in all domestic and foreign journals listed, arranged under the subject of the article with double entry when necessary and with numerous cross-references to facilitate the use of the Index. The figures in bold-faced type refer to reading-matter in THE JOURNAL.

The "Guide to Current Medical Literature," under which title the Index appears in pamphlet form,[1] contains, in addition, the titles of the articles listed, arranged chronologically and by journals, as in the Current Medical Literature Department. It is issued in separate form for convenience—to make it unnecessary to handle the bound volume of The Journal.

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[1] Behring's Method of Inoculation against Diphtheria, Berlin Letter, THE JOURNAL A. M. A., June 14, 1913, p. 1896.

[2] Smith, Theobald: The Degree and Duration of Passive Immunity to Diphtheria Toxin, Transmitted by Immunized Guinea-Pigs, Jour. Med. Research, 1907, xvi, 359; abstr., THE JOURNAL, July 20, 1907, p. 281.

[3] Behring: Active Immunity Produced by So-Called Balanced or Neutral Mixtures of Diphtheria Toxin and Antitoxin, Jour. Exp. Med., xi, 241. Further Studies on the Immunizing Effect of Mixtures of Diphtheria Toxin and Antitoxin, Jour. Med. Research, 1910, xxiii, 433.

[1] The Guide to Current Medical Literature may be obtained from the Association office at 50 cents a copy.

Just preceding the Index a list of the journals indexed during the past six months is given. Any foreign journal, except those starred, will be lent by The Journal to subscribers and members in the United States with the understanding that it will not be held over three days. Requests for journals should be addressed to the Library of the American Medical Association and six cents in stamps should be enclosed. This covers the average expense of mailing a journal. The addresses of the domestic journals are given, and these can be obtained direct from the publishers. No domestic journal will be lent as these can be obtained direct from the publishers as easily and as quickly as from us.

Current Comment

DIABETIC FOODS

Time and again The Journal has called attention to the dangers which beset both physician and patient in the prescribing or purchasing of flours or foods for diabetics. For years the hapless sufferer from diabetes has been cruelly exploited and physicians have been wickedly deceived by the manufacturers of foods that are sold under the claim—inferential or direct—that they have a low carbohydrate-content. The need of some adequate protection being given the public and the profession has been very practically recognized by the Connecticut Agricultural Experiment Station. This institution first examined a number of diabetic foods in 1906 when its analytical laboratory was under the direction of Dr. A. L. Winton. Since that time the laboratory has further extended the work under its present efficient director, Mr. John Phillips Street. In this issue we publish a preliminary report of the latest investigation by Mr. Street and Prof. L. B. Mendel of "Diabetic Foods Offered for Sale in the United States." The article is so brief and to the point that it needs no summarizing. The tabulations accompanying it will, we believe, prove of the utmost value not only to the profession but also to the public. It is highly desirable that physicians should have some thoroughly reliable and up-to-date information regarding the diabetic foods on the American market. We believe that Mr. Street's article furnishes just such information.

DRUGS CONCEALED IN POST-CARDS

A novel method of smuggling cocain and morphin to drug habitués was recently discovered in the Sing Sing State Prison at Ossining, N. Y. In spite of unremitting vigilance and the closing up of all conceivable channels, there seems to have been an unusual drug addiction among the convicts. The authorities realized that the convicts were getting their "dope," but how? It was a customary thing for convicts to receive through the mail embossed or encrusted cards, with bouquets standing out from the surface, and raised woodland scenes or figures. The cards were apparently from friends or relatives, and bore such messages as "We are well at home and always think of you." One morning when the mail was being examined before its delivery to the prisoners, attention was drawn to an embossed post-card which was suspiciously heavy. When the embossing of the suspected card was ripped loose the hollow space within was found to contain morphin pellets, some of them half a grain in strength. Other embossed or encrusted cards were found to contain some drug either in pellet or in powder form.

FELLOWS OF THE AMERICAN MEDICAL ASSOCIATION

At its recent annual session, the House of Delegates of the American Medical Association adopted what will appear to some a radical change, that is, the changing of the term "members" to "fellows" of the American Medical Association. It may be well, therefore, to emphasize once more the fact that the change is not a radical one, but simply and solely a change in name. This was explained in The Journal, March 8, 1913, p. 762. There is no change in relationship of any individual to the organization as a whole, or to the scientific branch, or assembly, of the American Medical Association. Heretofore, members of component county and constituent state associations have been designated as "members of the organization." The organization as a national body is the American Medical Association, and those who have been called "members of the organization" will hereafter be called "members of the A. M. A." So also, the contributing members—those who have been known as "members of the A. M. A."—are now designated as "fellows of the A. M. A."

THE MINNEAPOLIS SESSION

The sixty-fourth annual session of the American Medical Association has passed into history as a decided success. The efforts of the local profession bore fruit in pleasant arrangements for the entertainment of the visitors. The attendance was large, the states of Minnesota, Iowa, Wisconsin and the Dakotas being especially well represented. A summary of the registration by states and by sections will appear in The Journal next week, showing some interesting details. The report of the proceedings of the House of Delegates, which was begun in The Journal last week, is continued in this issue; and the minutes of the various sections will appear in The Journal July 5. The section work this year was unusually excellent. The programs were good, containing many uncommon contributions of importance. In addition, the section attendance and interest was greater than for many years, partly because of the freedom from distraction on the university campus. The section meetings were isolated from the busy city and from social engagements. Furthermore, complimentary lunch was served on the grounds at noon on Tuesday, Wednesday and Thursday; thus the members were able quickly to return to their section meeting places, and the attendance materially profited from this fact. The social events at Minneapolis were an interesting serie of well-planned functions. The ladies were well cared for, and had every attention shown them in that charming city. The House of Delegates was an earnest, active body, studying deeply the problems which came before it, and taking a number of rather important steps which deliberate study had shown to be wise. The Minneapolis and Minnesota physicians are to be congratulated on the large meeting which resulted from the call of the Northwest, and on the success which attended their efforts to entertain the American Medical Association.

THE PRESIDENT-ELECT—DR. VAUGHAN

In the selection of Dr. Victor Clarence Vaughan as President-Elect, the House of Delegates of the American Medical Association has done deserved honor to one of the eminent members of our profession—one who is eminent not only as a physician, but also as a chemist, as a medical teacher and as a scientist. Dr. Vaughan was born in Mount Airy, Mo. He received his preliminary education at Mount Pleasant (Mo.) College and the University of Michigan, and was graduated from the medical department of that university in 1878. During his student life he was assistant in the chemical laboratory, retaining this position for five years after his graduation. His connection with the teaching force of the university has continued until this day. In 1879 he became lecturer on medical chemistry. A year later he was made assistant professor of the same branch. After three years he was appointed professor of physiologic and pathologic chemistry and associate professor of therapeutics and materia medica, and in addition to this work, he was made director of the Hygienic Laboratory in 1887. In 1890 he became dean of the Department of Medicine and Surgery. He was a member of the State Board of Health from 1883 to 1895, and was reappointed in 1901, and made president of the board in 1904. During the Spanish-American War Dr. Vaughan served as major and surgeon of the Thirty-Third Michigan Infantry, U. S. V., and later as division surgeon, and was recommended by the President for the brevet of lieutenant-colonel. He was appointed a member of the United States Typhoid Commission in 1898-1899. In 1900 he became surgeon-general of the Spanish-American War Veterans. He has been an active member of the Association for many years, and has served as a member of the Council on Medical Education of the American Medical Association since its establishment in 1904. He is a member of many learned scientific societies, was president of the American Academy of Medicine in 1902, and of the Association of American Physicians in 1908. In addition to his text-book on physiologic chemistry, which appeared in 1879, he was co-author with Dr. Novy of the well-known books on "Ptomains and Leukomains" and "Cellular Toxins," and in addition, has contributed more than one hundred and fifty articles to current medical and scientific literature. Dr. Vaughan is a teacher of superior rank. He presents a subject in attractive and forceful manner and has developed new and practical methods of instruction. He is progressive in establishing and maintaining ideal elements in education. In public health conservation he sees the end and applies the means so that the public benefits from instruction which it appreciates and can utilize. His wide grasp of conditions, his habit of independent thinking and his firmness in standing for his own ideas fit Dr. Vaughan for leadership, and his choice as President of the American Medical Association must appeal to all as both natural and logical.

President-Elect Victor C. Vaughan

Medical News

CALIFORNIA

Personal.—Dr. Samuel Gardner, assistant chief surgeon of the Southern Pacific Hospital, San Francisco, was operated on for appendicitis in that institution, June 9. ——Dr. R. O. Moody, of the department of anatomy of the University of California, has been elected head of the Berkeley Dispensary.

Doctors' Building for San Francisco.—Members of the San Francisco County Medical Society have arranged to put up a thirteen-story building at Post and Powell Streets for the exclusive use of physicians and dentists. The building is to cost $2,000,000 and is to contain club rooms, an assembly hall, a medical library and headquarters for the medical society, the remainder of the building being given over to offices for physicians and dentists.

COLORADO

Appropriations.—The state has authorized the expenditure of $4,000 for the establishment of a workshop in Denver for the adult blind and $7,000 for the construction of sanitary cells at the State Penitentiary, Canyon City.

ILLINOIS

Personal.—Dr. A. S. Horn, Tampico, was operated on in the Dixon Hospital recently for vesical calculus.——Dr. and Mrs. George T. Palmer, Springfield, have removed for the summer to the new tuberculosis colony located west of the city, of which he is in charge.——Dr. H. D. Singer, Hospital, head of the Psychopathic Institute, fractured his right arm while cranking his automobile, June 6.——Dr. Sidney D. Wilgus, Hospital, has purchased the Jenks Sanatorium, Rockford, from the widow of Dr. Jenks.——Dr. W. F. Reynolds, Eldora, fell recently, dislocated his shoulder.——Dr. J. Mather Pfeiffenberger, Alton, has started for Europe.——Dr. E. M. Price, Astoria, spilled a bottle of nitric acid on his face and arms, seriously injuring his right eye. He is in the Galesburg Hospital for treatment.——Dr. C. Martin Wood, Decatur, has returned from Europe.

Chicago

Minor on Tuberculin.—On June 16, Dr. Charles L. Minor, Asheville, N. C., delivered an address to the Study Circle of the Chicago Tuberculosis Institute at the City Club on "My Experience in Tuberculin Treatment."

Medical Women Elect.—The Medical Women's Club held its annual meeting, June 11, and elected the following officers: president, Dr. Effie L. Lobdell; vice-presidents, Drs. Marie B. Mayer and Eliza R. Morse; secretary, Dr. Sadie B. Adair, and treasurer, Dr. Agnes Mikkelsen.

Municipal Sanatorium.—The finance committee of the Chicago city council passed a resolution, June 13, authorizing the trustees of the Municipal Tuberculosis Sanatorium to spend $400,000 for the infirmary group of buildings now under construction at North Fortieth and Bryn Mawr Avenues.——Dr. William E. Buehler, president of the board of trustees of the Gil W. Barnard Masonic Hospital Association announces that he has the promise of subscriptions sufficient to finance the hospital. The institution is to cost about $150,000 and work will be commenced in the near future.——A permit has been granted for a five-story brick addition to St. Joseph's Hospital to cost $180,000.

INDIANA

Jury Finds for Physicians.—In the case of Carlton Chaney against Drs. Hugh H. Elliott and John T. Paxton in which malpractice was charged and $5,000 damages asked, the jury, on June 13, rendered a verdict in favor of the defendants.

Contract Let for Hospital.—The contract for the construction of the new hospital building at the Indiana School for Feeble-Minded Youth, Fort Wayne, was awarded June 7, the contract price being $69,950. The hospital will consist of a main building and one wing.

Tuberculosis Notes.—A tract of five acres of ground near Anderson has been donated by the city council for a tuberculosis camp. The local council of women expects to provide the funds for its equipment. The camp will accommodate one hundred patients.——The sick ward of the Boehne Antituberculosis Camp, Evansville, was dedicated June 15.

MARYLAND

New Building for State Hospital.—Work has commenced on a new building at the Spring Grove State Hospital for the Insane, Catonsville, to cost $75,000. The building will accommodate 100 patients and will be used for acute cases.

Price Declared Sane.—After having been adjudged insane by a sheriff's jury at Towson, without his knowledge, and after being confined in institutions for the insane since April 22, Dr. Marshall Langton Price, formerly secretary of the State Board of Health, was declared sane, June 20, also by the verdict of a sheriff's jury at Towson. Proceedings against him were brought by his wife, and after two physicians had certified that he was of unsound mind, the court signed an order excusing his attendance before the jury. The second jury was summoned on petition of Dr. Price through his counsel, in which he claimed that the former proceedings were of ex parte nature and were undertaken without his knowledge or presence. Dr. Price took the stand and declared that his nervous condition was caused by mental worry. Dr. Arthur P. Herring, secretary of the State Lunacy Commission, testified that Dr. Price and Dr. Charles G. Hill of Mount Hope, testified that Dr. Price and Dr. Charles G. Hill of Mount Hope, while Dr. Edward N. Brush of the was in normal condition while Dr. Edward N. Brush of the Sheppard and Enoch Pratt Hospital, testified to the contrary.

Baltimore

New Laboratory.—At the Church Home and Infirmary, a pathologic laboratory has been fitted up in the basement at an expense of about $2,000.

Donation to Hospital.—A donation is to be given to the Kernan Hospital for Crippled Children which will increase the capacity of the institution to forty beds.

Personal.—Dr. William S. Halsted sailed for Europe June 10.——Dr. Guy L. Hunner had conferred on him the honorary degree of Doctor of Sciences by Dickinson College, Carlisle, Pa., June 11.

Public Health Exhibit.—The Medical and Chirurgical Faculty of Maryland will install a public health exhibit at the Fulton Avenue Baptist Church under the auspices of the Boys' Brigade Hospital Corps. In addition to the exhibit, daily addresses will be given.

Honorary Degrees Conferred.—Yale University has conferred the honorary degree of A.M. on Dr. Harvey W. Cushing, formerly of Johns Hopkins Medical School.——St. Johns College, Annapolis, has conferred the honorary degree of A.M. on Dr. Nathan Winslow.

MASSACHUSETTS

Tuberculosis Notes.—Night clinics for the diagnosis and treatment of tuberculosis have been opened at the out-patient department of the Boston Consumptives Hospital, 13 Burroughs Place, for patients unable to attend in the daytime. The clinic is to be opened at 7 o'clock each Monday evening.

Old Health Official Dies.—Charles A. Downes, for twenty-five years a clerk and inspector in the Boston Board of Health, since that time superintendent at the State Sanatorium, Lakeville, and a special officer of the Massachusetts Humane Society, died in the Boston City Hospital, June 10, from pneumonia.

State Medical Society Meeting.—The one-hundred and thirty-second annual meeting of the Massachusetts Medical Society was held in Boston, June 10-11. The Shattuck lecture was delivered by Dr. Harvey W. Cushing, Baltimore, on "Diabetes Insipidus." The following officers were elected: president, Dr. Walter P. Bowers, Clinton; vice-president, Dr. Lyman Asa Jones, North Adams; secretary, Dr. Walter L. Burrage, Boston (reelected); treasurer, Dr. Edward M. Buckingham, Boston; librarian, Dr. Edwin H. Brigham, Boston, and chairman of the committee of arrangements, Dr. Arthur N. Broughton, Jamaica Plains.

MICHIGAN

Society Enlarges Home.—The Wayne County Medical Society, Detroit, is to build an addition to its club building at 33 High Street, East, to cost about $35,000. The addition will be two stories in height; the lower floor is to be equipped with laboratory apparatus and the upper floor as a medical library.

Personal.—Dr. W. E. Blodgett, Detroit, has been elected consulting orthopedist to the Butterworth Hospital, Grand Rapids, and will hold a clinic at this hospital on Friday of each week.——Dr. Guy L. Kiefer, health officer of Detroit, has resigned and will reenter private practice.——Dr. Henry M. Leach, Saginaw, is reported to be critically ill with heart disease.——Dr. G. L. McBride has been elected chief, Dr. Ralph H. Spencer, vice-chief and Dr. Ralph C. Apted, secretary of the staff of the Butterworth Hospital, Grand Rapids.——The house and office of Dr. M. C. L. Kitchen, Lupton, was burned recently and Dr. Kitchen has removed to Bentley.——Dr. Max Ballin, Detroit, who has been seriously ill, is reported to be convalescent.——Dr. Charles M. George, Detroit, held for an investigation in connection with the death of Belle Barry, has been released as no evidence appeared against him.

MISSOURI

St. Louis

Addition to Hospital.—St. Luke's Hospital is to have a new addition to cost $175,000. The addition is to be four stories in height, 128 by 40 feet, and will accommodate about sixty patients. A maternity ward will be the chief feature of the new structure.

Farm Sanatorium.—A forty-acre farm in St. Louis County has been offered to the Missouri Association for the Relief and Control of Tuberculosis to be used as the site for a sanatorium for children suffering from tuberculosis. The organization has tentatively accepted the gift.

Personal.—Dr. Elias Potter Lyon, dean of the St. Louis University School of Medicine has been appointed by the University of Minnesota Regents to succeed Dr. F. F. Wes- University of Minnesota Regents to succeed Dr. F. F. Wes- brook, dean of the College of Medicine. Dr. Lyon will also be director of the department of physiology. He will take charge of the department, September 1.

NEW YORK

New York State Mineral Springs Reservation Commission Meets.—This organization met at Saratoga on June 17 and on the evening of that day the members were the guests of honor at a dinner given at the Casino by the Saratoga Springs Medical Society. One hundred guests were present from New York City and many from cities in northern New York. Addresses were made by George Foster Peabody, General Benjamin Tracy and Dr. Simon Baruch.

A New Health Organization.—The Bureau of Hygiene was incorporated by the secretary of state June 10, the directors are John D. Rockefeller, Jr., and Paul M. Warburg of New York City; Starr J. Murphy and Charles O. Heydt of Montclair, N. J., and Katherine Bement Davis of Bedford, N. Y. This bureau has for its objects the study, amelioration and prevention of undesirable social conditions, crimes and diseases which adversely affect the well-being of society, with special reference to prostitution and the evils associated therewith, and for the establishment of voluntary aid to cooperate with public and private agencies.

Board to Study School Children's Ailments.—Health Commissioner Dr. Francis E. Fronczak, Buffalo, has appointed an advisory or consulting board of eleven physicians to act with Dr. Arthur E. Schaefer, deputy health commissioner and head of the Bureau of Hygienics, to study and remedy physical ailments responsible for subnormal school children. The board is made up as follows: neurology, Drs. Floyd S. Crego, Arthur C. Schaefer, R. Montfort Schley, Herman G. Matzinger and D. R. Kuhlman; medicine, Drs. Carroll J. Roberts, Franklin W. Barrows and Francis A. Drake; rhinology and laryngology, Dr. George L. Brown; ophthalmology, Dr. Charles S. Meahl, and gynecology, Dr. Maud J. Frye.

New York City

New Home for Nurses.—The Red Cross Hospital, located on Central Park West, is about to build a four-story extension to the hospital building to be used as a nurses' home, at a cost of $20,000.

Vaccination for Vacationists.—Health Commissioner Lederle urges those who are going to spend their vacations in the country to be vaccinated against typhoid and reminds them that the Health Department will perform the vaccination free.

Personal.—Dr. S. Simon Baruch and Dr. Augustus B. Wadsworth have resigned from the faculty of the College of Physicians and Surgeons.——Dr. and Mrs. C. A. Brown, Dr. and Mrs. William Fletcher Stone, Dr. and Mrs. Robert Abbe, Dr. Alexis Carrel and Dr. J. E. Palmer have sailed for Europe.

Protection Against Wood Alcohol.—The New York Commission for the Prevention of Blindness has written to Mayor Gaynor urging him to sign the ordinance recently passed by the Board of Aldermen requiring manufacturers of wood alcohol in New York State to label the liquid "wood poison." In investigating the causes of blindness in the state it was found that four persons had been killed and fourteen blinded during the past year by drinking or inhaling wood alcohol. The Central Federated Union has also asked the mayor to sign the ordinance.

Commencements.—Cornell University conferred the degree of doctor of medicine on nineteen graduates at its commencement on June 12. Addresses were made by Dr. William L. Polk, Dean of the Medical Department of the University and by Acting President Crane of the University. It was announced that every graduate had received a hospital appointment.——The Medical Department of New York University and Bellevue Hospital Medical College bestowed diplomas on seventy-five graduates at the annual commencement on June 4. The Valentine Mott bronze medal was awarded to Noel H. Campbell of Brooklyn; the John A. Fordyce prize in dermatology to Myron Louis Morris of New York, and the Glover C. Arnold prize in surgery in equal parts to Thomas Webster Edgar and Irving Gray, both of New York.

Public Health Board.—Representatives of nearly one hundred private charitable organizations met at the New York Academy of Medicine on June 4 under the auspices of the Public Health Committee of the Academy and formed a central committee for the purpose of securing cooperation toward the general conservation of the public health of the city. The following resolutions were adopted:

> WHEREAS, There are in the city about 100 private organizations interested in the various phases of public health work; and
>
> WHEREAS, The existing lack of close cooperation and coordination permits duplication and waste of effort as well as distinct loss in effectiveness of the various independent endeavors; therefore be it
>
> *Resolved,* That a central committee of the public health of New York City, composed of representatives of the various organizations, be chosen to act as a clearing house for the exchange of ideas and information, and for the coordination of the varied private health activities of the city and to provide for the institution of an annual conference of the organizations.

The central committee was made up as follows: Chairman, John H. Finley, president of City College; secretary, Dr. E. H. Lewinski-Corwin; Dr. John H. Huddleston, Miss Lillian D. Wald of the Nurses' Settlement; Dr. Edward L. Keyes, Jr., Dr. C. E. A. Winslow of the American Museum of Natural History; Dr. Luther H. Gulick, Dr. Livingston Farrand, Homer Folks, and Charles L. Dana. It was announced that Mrs. E. H. Harriman had offered to meet the expenses of carrying on the work.

NORTH CAROLINA

State Society Meeting.—At the annual meeting of the Medical Society of the State of North Carolina held in Morehead City, June 17-19, the following officers were elected: president, Dr. J. M. Parrott, Kinston; vice-president, Dr. John R. Irwin, Charlotte; secretary, Dr. John A. Ferrell, Raleigh (reelected); chairman of the committee of arrangements, Dr. Albert Anderson. Drs. Cyrus Thompson, Jacksonville, and A. A. Kent, Lenoir, were chosen members of the State Board of Health. The new board of councilors was organized and elected Dr. M. L. Stevens, Asheville, president, and Dr. K. P. B. Bonner, Morehead City, secretary. The society adopted a plan of medical defense whereby an attorney is employed by the organization to handle all prosecutions of members and to look after the enforcement of the medical laws of the state, thus relieving individual members and the component societies from this duty.

OREGON

Alumni Association Organized.—On June 19, a number of the graduates and faculty of the medical department of the Univeristy of Oregon met in Portland and organized an alumni association, electing the following officers: president, Dr. W. E. Smith, Portland; vice-presidents, Drs. William A. Trimble and J. C. Tamiesie, Portland, Dr. Isabel Sedgwick, Vancouver, Wash., and Dr. F. E. Selover, Eugene; secretary, Dr. A. G. Bettman, Portland; treasurer, Dr. Charles L. Rybke, Portland. It was decided that after the merger of the medical department of the Willamette University, Salem, with the medical department of the University of Oregon, the alumni of the former institution will be admitted to the Association on equal terms. The merger takes place June 17.

PENNSYLVANIA

Personal.—Dr. O. F. Harvey has resigned from the staff of the White Haven Sanatorium to accept a position as assistant superintendent of a similar institution in Howell, Mich.

Lazear Memorial Fund.—At the twenty-fifth reunion of the class of 1888 of Washington and Jefferson College, Washington, June 17, a library memorial fund was established in honor of Dr. Jesse W. Lazear, M.C., U. S. A., a member of the class, who left before graduation to study medicine and who afterward became a member of the commission to investigate the rôle of the mosquito in the transmission of yellow fever, and therein became a martyr to the cause of scientific research.

Philadelphia

City Bath Houses Open.—Bath houses in every part of the city were thrown open on June 20 for the summer season; Mondays and Thursdays will be reserved for women and girls.

Alumnae to Raise Endowment.—The Alumnae Association of the Women's Medical College has formulated plans to raise an endowment fund of $500,000 to continue maintenance of the college as a separate institution.

Health Officer Sustained.—On June 20, the Board of Health ordered the quarantine of a residence on North Bouvier Street, upholding the diagnosis of scarlet fever made by Dr. Andrew A. Cairns of the board's staff in opposition to the verdict of four other physicians.

Civic Club to Work for Wrapped Bread.—The Civic Club, through its pure food committee, plans a campaign this summer to arouse women to the unnecessary danger incurred through the handling of bread. An endeavor will be made to have bakers wrap all bread so soon as it leaves the ovens.

More Vivisection Warrants.—The Women's Society for the Prevention of Cruelty to Animals is preparing further prosecution of those connected with the medical school of the University of Pennsylvania and several additional warrants will be issued. Dr. J. E. Sweet, assistant professor of surgical research, is under bail awaiting a hearing on the charge of cruelty.

Health Bureau Issues Warning.—The Department of Health has issued a warning to the householders of the northeast section of the city to boil all water coming from the city mains, because of an increase in the number of typhoid fever cases. Manufacturers are blamed for the increase for pumping raw unfiltered water in the piping system, connected at some points with the city mains.

Building for Medical Society.—At the meeting of the Luzerne County Medical Society in Wilkes-Barre, June 11, the executive committee was authorized to purchase a site for the erection of a permanent home for the organization. A site 54 by 75 feet at South Franklin Street has been selected and a two-story brick building will be erected on this site containing offices, assembly and reading rooms and a library.

Baby Saving Show Opened.—The annual baby saving show, under the auspices of the Child Hygiene Association opened on the second floor of the City Hall, June 19. The exhibit will be conducted all summer and in addition to a model room, showing the best conditions for raising a child, an apartment is shown showing the worst conditions. One corner of the show is devoted to teaching how a baby should be treated and cared for at bathing time; how a child should be kept cool, etc.

Medical Institutions.—Builders are estimating on the plans and specifications for a new *x*-ray laboratory for the Medico-Chirurgical Hospital.——The city is prepared to begin the additional buildings at the Philadelphia Institution for the Feeble-Minded at Byberry Farms. Contracts have been awarded for a two-story building, containing dining room and kitchen, 149 by 78 feet, to be built at a cost of $28,000, and a laundry building, a two-story structure, 43 by 90 feet, to cost $41,000.

Class Reunions.—At the annual reunion of the class of 1893 of the Medical Department of the University of Pennsylvania, June 13, Dr. John R. Frost, secretary of the class, was presented with a gold watch in appreciation of his work as class historian.——At the fifteenth annual reunion dinner of the medical class of 1898 of the University, held June 15, Dr. A. A. Uhle was presented with a gold watch given by the class as a reward to the man who had done the best and most notable research work since graduation; Dr. Theodore Le Boutillier was unanimously elected permanent class historian and announcement was made that a permanent club house at 3705 Woodland Avenue had been secured.

Hospitals.—The hospitals on the Race and Chestnut Street Piers opened June 19, but neither will be in running order for a week, owing to the provisions of recent appropriations to the Department of Child Hygiene of the Bureau of Health. The Chestnut Street Pier will be kept as heretofore as a nursery and play place for babies while the Race Street Pier will have sixty beds installed, have fifteen nurses and a resident physician, and all babies found to be in need of hospital treatment will be sent there.——A school popularity contest was opened June 10 to obtain funds for the erection of the Providence General Hospital, to be built at Lincoln Drive and Wissahickon Avenue. A perpetual bed, valued at $5,000, will be established for the school receiving the largest number of votes, to be used by sick pupils.——The West Philadelphia Hospital for Women, Preston and Forty-First Streets, is planning for a brick addition.——Alterations, to cost $3,000, are to be made to the Williams ward building at the department for the insane of Pennsylvania Hospital, Market and Forty-Fourth Streets.——The Hospital of the Woman's Medical College of Pennsylvania opened its new building in North College Avenue, June 3.

SOUTH CAROLINA

Dispensary Opened.—A medical dispensary has been opened at Hartsville. It is located in a cottage in Mill Village which as been remodeled. Medicines and the services of a trained nurse are at the disposal of the operatives without expense.

New State Board Members.—The governor, on recommendation of the South Carolina Medical Association, has appointed Dr. E. W. Pressly, Clover, and Dr. John Lyon, Ninety-Six Greenwood, as members of the State Board of Medical Examiners.

Personal.—Dr. W. L. Pou has completed sixty years of practice at St. Matthews.——Dr. Lee J. Hammett, Gaffney, has been appointed resident physician at Mountain View Sanatorium, Catawba, Va.——Dr. William Weston, Columbia, associate physician at Thompson Infirmary, has resigned and will specialize in diseases of children.——Dr. J. J. Watson, Columbia, has been appointed physician in charge of the infirmary.——Dr. G. M. Mood has been elected city bacteriologist of Charleston, vice Dr. Robert Lee Wilson.

SOUTH DAKOTA

New Hospital.—Dr. T. S. Kammerling, Spencer, has purchased the Dr. Kelly Hospital in that place and will take over the management at once.

Personal.—At the annual stockholders' meeting of the German-Baptist Hospital Association, Aberdeen, Dr. C. A. Homan was reelected president and Dr. F. W. Freyburg, Mitchell, vice-president.——Dr. Frederick W. Minty, Rapid City, has been designated as the official censor of the Black Hills Medical Society.

Physicians Exonerated.—At a meeting of the Board of Censors of the Black Hills Medical Association, charges preferred by Dr. C. W. Hargens, Hot Springs, against Drs. P. T. Geyerman, J. B. Naftzger and F. E. Walker, Hot Springs, for alleged violation of the principles of ethics by advertising in Hot Springs papers, were dismissed after an exhaustive hearing.

State Association Meeting.—The thirty-second annual meeting of the South Dakota State Medical Association was held in the Law Building of the State University of Vermillion, May 27 to 29 and the following officers were elected: president, Dr. F. A. Spafford, Flandreau; vice-presidents, Drs. Fred Treon, Chamberlain, and J. B. Vaughan, Castlewood; secretary-treasurer, Dr. R. D. Alway, Aberdeen, and councillors, Drs. H. T. Kenney, Pierre, and T. J. Billion, Sioux Falls.

TENNESSEE

New Isolation Hospital Recommended.—Dr. W. E. Hibbett, health officer of Nashville, has recommended that a new isolation hospital be constructed for the city. The old building is located some distance from the city, is too small and is at times surrounded by backwater.

New Officers.—East Tennessee Medical Association spring meeting held at Lenoir City, May 15-16: president, Dr. J. G. Eblen, Lenoir City; secretary-treasurer, Dr. H. P. Larimore, Chattanooga. The fall meeting will be held at Rogersville and the spring meeting of 1914 at Harriman.

State Board Elections.—At the annual meeting of the State Board of Medical Examiners held in Nashville, May 30, Dr. Ambrose McCoy, Jackson, was elected president to succeed Dr. E. E. Hunter, Elizabethton; Dr. W. L. McCreary, Knoxville, vice-president, vice Dr. W. H. Halbert, Nashville, and Dr. A. B. De Loach, Memphis, secretary in place of Dr. C. A. Abernathy, Pulaski. The office of the secretary is to be moved to Memphis.

Personal.—Dr. A. B. De Loach, Memphis, has been appointed a member of the State Board of Medical Examiners.——Dr. J. J. Tatum has been elected a member of the Gleason common council.——Dr. D. M. Ford, Meadorville, was fired on from ambush near that place, June 11, but was not injured. An ex-convict has been arrested charged with the crime.——Dr. Z. D. Massey, physician of the State Prison, Nashville, was operated on in St. Thomas Hospital in that city, June 1, for appendicitis, and is reported to be doing well.

TEXAS

Warning.—The public is warned against a person signing himself John Gamble, who is going through the State of Texas claiming to be organizing a beneficiary order known as the Loyal Order of Lions. He is said to agree to appoint a physician medical examiner for the order, providing he will become a member of the order. After collecting from $3 to $5 from the physician, however, it is said that Gamble disappears.

Personal.—Dr. H. K. Leake has been reelected president of the Board of Health of Dallas.——Dr. August J. Streit, Galveston, was operated on for appendicitis in Waco June 6——Dr. C. W. Truehart, recently reelected city health officer of Galveston, has resigned, to take effect August 15.——Dr. T. T. Jackson, San Antonio, has been elected health officer of Bexar County, vice Dr. D. Berrey.—Dr. W. L. Barnard, Carrizo Springs, has been appointed local surgeon of the San Antonio, Western and Gulf Railroad.——Dr. John T. Moore has been elected president and Dr. S. M. Lister, vice-president, of the Houston Board of Health.

Sanatorium and Hospital Notes.—Newton Sanatorium, Cameron, is well under construction. The building will cost about $50,000.——Tarrant County and Fort Worth will be the first to erect a joint county hospital under the provisions of the Colquitt-McGregor act, which goes into effect July 1. Under this act, cities and counties acting jointly are given authority to care for and maintain locally, victims of tuberculosis or other communicable disease and thereby obviate the necessity of sending them to the State Tuberculosis Colony, Carlsbad.——Dr. I. N. Suttle, Corsicana, has purchased a house at Thirteenth Street and Sixth Avenue and will convert it into a sanatorium for surgical patients.——Physicians of Wichita Falls are planning the establishment of a new hospital.——The new two-story reinforced concrete building erected by the Texas Antituberculosis Association on the Sealy Hospital ground, Galveston, for the treatment of children suffering from tuberculosis of bones, is ready for occupancy and will be in operation some time this month.

Faculty Changes.—The following changes in the faculty of the University of Texas Department of Medicine are announced: Dr. George Fay Gracey, professor of chemistry and toxicology resigned to enter practice in New York as a specialist on diseases of the eye; Dr. Howard Rush Dudgeon, adjunct professor of surgery and clinical professor of genito-urinary diseases and dermatology, resigned to enter private practice in Waco; Dr. George Cyrus Kindley, demonstrator of pathology and bacteriology, resigned to enter practice in Pittsburg; Dr. Reuben Morgan Hargrove, resigned to take a surgical internship in Philadelphia hospitals; Dr. James Persons Simonds, professor of preventive medicine, is attending summer school at Harvard University, preparing to take the degree of Doctor of Public Health; Dr. Marie Charlotte Schaefer, associate professor of biology, histology and embryology, has been given a leave of absence for one year on account of health; Dr. James J. Terrill, professor of pathology, has resigned and will locate in Temple; Dr. H. O. Sappington, lecturer on, and demonstrator in obstetrics and gynecology, has resigned on his election as member of the Galveston City Commission.

VIRGINIA

New Officers.—Southwestern Virginia Medical Society at Roanoke, June 3-4: president, Dr. John A. Tipton, Hillsville; secretary-treasurer, Dr. A. B. Greiner, Rural Retreat, (reelected). Marion was selected as the next place of meeting.

Personal.—Dr. B. E. Summers has been elected medical inspector of Richmond, vice Dr. V. T. Goode, Jr., resigned on account of ill health.——Dr. Charles V. Carrington, Richmond, who recently returned from abroad, was operated on for acute appendicitis at St. Luke's Hospital, June 1, and is reported to be doing well.

Hospital News.—A preliminary meeting of physicians of the Eastern Shore was held at Accomac recently, looking to the establishment of a hospital at Accomac Court House.——The last of the patients were transferred from the Virginia Hospital to the Memorial Hospital, Richmond, June 10. It is probable that the Virginia Hospital will be converted into dormitories for the use of students of the Medical College of Virginia.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, June 7, 1913.

The Falling Birth-Rate

According to a report just issued by the census office this country contains a larger proportion of young adults than either France, Germany, Holland or Sweden. It has fewer children than any of those countries but France, and fewer older persons than any except Germany. In consequence of the fall in the birth-rate the proportion of young children has considerably diminished. For each million of the population in 1881 there were 135,551 children under the age of 5 years. In 1891 this number fell to 122,523, and since then to 114,262 in 1901 and to 106,857 in 1911.

At the London School of Economics and Political Science Karl Pearson, in delivering a course of lectures on "Infant Welfare," drew attention to the falling birth-rate which has existed since 1878. He showed that the process was less rapid in places like Sheffield where men were chiefly employed, whereas in places like Dewsbury, where wool was the staple industry, it was more marked. In woolen areas the average families were 1.3, in cotton areas 1.8 and in engineering areas 2.12, the interpretation being that, except in the latter case, the families, and consequently the towns, were not reproducing themselves. Immigration from the rural districts could not continue, for their birth-rates, too, were falling. The character of the population was tending to become more middle-aged, and if the population was to be replaced, average families of four and five were required—a point of vital importance to the nation, for no nation of forty millions could stand against one of sixty millions. That was the political aspect. The suggestion had been made that the loss might be made good by better care of the children, but by keeping the children alive it would not be possible to get the class of mentally and physically fit children that was desired. It had to be remembered that a fall in the infant death-rate was accompanied by a rise in the percentage of delicate children, and vice versa.

Mental Deficiency Bill

At present scores of thousands of mental and defective persons are left uncared for and unprotected to live a miserable existence, who might live happily under proper provisions. With this object the government has introduced a bill which has passed its second reading and according to which all mentally defective persons, whether lunatics, imbeciles, idiots or feeble-minded, will be placed under a single board of control consisting primarily of the existing state-paid lunacy commissioners. This board will consist of twelve paid commissioners, at least one of whom must be a woman, and three unpaid commissioners, of whom one must be a woman. Feeble-minded persons not now certifiable as insane will not be dealt with compulsorily unless it is proved that they are neglected, abandoned or cruelly treated, or that they are guilty of some crime or of habitual drunkenness or children certified by the local authority as being too low mentally or morally to benefit by special schools. The only other class which comes under the bill is that of women who give birth to illegitimate children while in receipt of poor-relief. The number of persons who it is estimated will have to be provided for by the bill is 90,000.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, June 6, 1913.

A Chair of Exotic Pathology

A chair of exotic pathology has been established at the Collège de France. The assembly of the professors of the college has submitted for the choice of the ministry, Dr. Nattan-Larrier as their first choice and Dr. Tanon as their second choice for this chair.

Death of Dr. Gaujot

Dr. Gaujot, former medical inspector of the military health service, is dead. He was professor of clinical surgery and director at the Ecole d'application de médecine et de pharmacie militaires du Val-de-Grace.

A Tribute to American Science

Admiral Peary, the discoverer of the North Pole, is to be received this evening at a formal meeting of the Geographical Society. In connection with this, Charles Nordmann, an astronomer at the Observatory of Paris, published an article which ended thus: "In honoring Peary we give just due to an admirable thing which excites the envy of the whole world—American science. Is it because this young nation is not tied down by red tape as we are? Is it because in that country old age is not a necessary or sufficient condition for obtaining the opportunities to achieve things and that young men direct the laboratories as well as command the battleships? One thing is certain: In addition to the monstrous cannons which command respect in the domain of force, the United States knows how to make new arms for conquering the realms of thought. In this field especially America is great and is worthy of its flag studded with stars."

A Chair of Child Hygiene

The commission on depopulation has decided that it would be well to organize in the various schools of medicine specialized instruction on child hygiene. The Faculté de médecine de Paris passed a resolution last February in favor of the creation of a chair of child hygiene (THE JOURNAL, March 22, 1913, p. 917).

Physicians' Service in Dueling

Has a doctor the right to fees for his services as a physician in a duel? A court in Cairo presided over by a French judge recently passed on this question. A doctor demanded $20 (100 francs) as his fee for his services in a duel. The duelist declared that the claim was not legal because it was based on complicity in an illegal act. The decision was that although the seconds of the duelist were his accomplices in crime, this was because the conditions of the duel required the seconds to give aid and assistance to the duelist in this commission; but the physician, when he gives no such aid, merely acts in his official capacity, and therefore has a right to his fee.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, May 30, 1913.

Personal

Prof. F. A. Hoffmann, director of the University Medical Policlinic at Leipsic, has been appointed regular privy councillor, with the title of Excellency.

Professor Abderhalden goes to Vienna as the successor of Professor Ludwig to take charge of the Institute for Medical Chemistry.

Alcoholic Excesses among Students

That in spite of the anti-alcoholic declaration of the students the sport of drinking among them occasionally leads to marked excesses, has been shown anew by an unfortunate occurrence at Halle. May 26 a student took a seat at a table in a beer-saloon, put a beer-glass on his head and let a fellow student shoot at it. Four shots were fired, amid the great excitement of the crowd, three of which went wide of the mark; the fourth hit the student in the head.

At the surgical clinic, to which the wounded man was taken, there was found a complete left-sided hemiplegia. The prognosis is said to be very doubtful. The unlucky marksman who, like the student, was drunk, was arrested. With some satisfaction we have ascertained that in this sad case it is not a medical student who is concerned, but a law student and a philologist. It is to be hoped that the occurrence will be a flesh-and-blood illustration, teaching the results of acute and chronic alcoholism to medical students.

Temperance Leaflets for Soldiers

In order to restrict the use of spirits in the army, all soldiers are furnished free of cost with circulars which describe, by examples, the bad results of excessive use of alcohol and the military offenses resulting from it. After next autumn the circulars will be distributed yearly to the new recruits.

Offices of Specialists

In consequence of the remarkable changes in population in Greater Berlin, especially with reference to the fact that the patients of the Krankenkassen often live in different localities from those in which the private dwellings of the specialists are situated, a number of specialists have established one or more offices in various locations aside from their private offices. A number of general practitioners have repeatedly objected to this custom, because they have found that it injures their practice. In addition many other specialists do not approve of the methods of their colleagues.

In order to restrict this evil the Union of Free-Choice Insurance Physicians has proposed that in future the members shall have their medical insurance office only at the location of their private office. In order to carry out this idea a general meeting of the society, which includes nearly 2,000 physicians of Greater Berlin, was called. After thorough and very lively debate the specialists remained the victors. It was determined by vote that the hitherto prevailing custom should be allowed to continue.

Dedications of Hospitals

The additional buildings of the Charlottenburg Infants' Home were dedicated, May 8. The home is founded by a private society. In this infants' home—the only institution of its kind in Germany—mothers may remain six months with their children, an advantage of the greatest importance for the health and prosperity of the children. In addition, children of well-to-do families may be taken for a certain time to board, a provision by which the society is assured a good source of income.

May 19, a new lupus sanatorium with forty beds was opened for business in Giessen. The director of the institution is Professor Jesionek, director of the Giessen clinic for skin and venereal diseases. In addition to this sanatorium, there is a similar lupus institution at Graudenz in West Prussia.

Merging of Annual Meetings

In order to avoid the contemporaneous sessions of German annual medical meetings, the executive committee of the Gesellschaft der Naturforscher und Aerzte has written to the German-Austrian scientific and medical societies proposing and urging a systematic and scientific cooperation of these societies with the first-mentioned association. It is proposed that all the societies hold their annual meeting separately one year, and the next year in common with the other societies, at the annual meeting of the first-mentioned association, generally called the Naturforscher congress. One year chiefly the special questions of each particular science will come up for discussion, while every alternate year, in which the common meeting is held, questions will be discussed which are of interest in common to all scientists and physicians, or to larger groups. This matter will be discussed on the occasion of the eighty-fifth Naturforscher meeting at Vienna next autumn.

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, June 7, 1913.

Some Figures Relating to Contract Practice in Austria

The official report of the union of the Austrian sick clubs (Krankenkassen) was published recently, dealing with the year 1912. Some of the figures are interesting to medical men. Thus, the number of the members of all the 3,350 clubs—for as many are reported on—was 3,467,329. Of these, 1,353,165, or about 40 per cent., were ill for at least three days each; under this space of time no records are kept of those unfit for work. These patients received altogether sick-pay for 29,042,720 days, or on an average each patient was twenty-three days ill. It is interesting to note that besides these cases of illness, 56,198 cases of childbirth, with 1,555,508 days of sick-payment were recorded (28 days each). The last item is one of the latest additions to the benefits extended to the members of the clubs, and the beneficial effect of this measure on the health of the mothers is well marked. There were 27,731 cases of death from disease among the members, 0.75 per cent of the total number of the insured persons, while this figure formed a little over 2 per cent. of the total of the patients in 1912. It is one of the lowest figures of mortality on record since the formation of the Krankenkassen (1882) in Austria.

The income of all the clubs from the weekly and the monthly contributions of the employers and employed persons (for these form the clubs) amounted to $18,000,000 (86 million kronen), while the expenditures were nearly $16,000,000 (79,000,000 kronen). The expenditures in favor of the insured person required 85 per cent. of the total expenditure. Out of these sums, medical help, including medicines, required 13½ million kronen; in 1911 it required 12½ million, and in 1910 only 11½ million (from 16 to 17 per cent. of the total). If we consider the expenditure per patient, we find that each patient cost the clubs 70 cents (3.67 kronen) or each day 7 cents (one-third of a krone). Such small sums naturally show that the payment of the medical men must be very low indeed. But the surplus of $1,500,000 (7 million kronen) signifies that doctors' fees could be increased a good deal without endangering the budget of the clubs, as they always assert.

Marriages

Lawrence R. Packard, M.D., Whitehall, Mont., to Miss Fanny Graves of Shelton, Minn., at Livingston, Mont., June 1.

Lawrence Safford Chamberlain, M.D., San Diego, Cal., to Miss Mabelle Lucille Power at Coronado Beach, June 7.

William Lawrence Estes, M.D., South Bethlehem, Pa., to Miss Anne Greble of Washington, D. C., June 11.

James Robert McCord, M.D., New York City, to Miss Marion Crawford Roberts of Utica, N. Y., June 25.

Ira Ellis Hunter, M.D., to Miss Pearl Belle Langendorf, both of Toledo, Ohio, at Perrysburg, O., June 5.

Paul Colgrove, M.D., Oberlin, Ohio, to Miss Mildred Kerlin of Storm Lake, Iowa, at Iowa City, Iowa, June 11.

August J. Streit, M.D., Galveston, Tex., to Miss Benedicta Hander of Perry, Tex., at Waco, Tex., June 5.

Robert Garfield Savage, M.D., Oak Park, Ill., to Miss Margaret Neary of Austin, Chicago, June 11.

Robert Franklin Lischer, M.D., Mascoutah, Ill., to Miss Clara E. Herman of Freeburg, Ill., June 10.

John Charlesworth Littell, M.D., U. S. N., to Miss Grace L. Green at Salt Lake City, Utah, June 4.

Argo Montague Foster, M.D., Appleton, Wis., to Miss Isla Saunders of Oconto Falls, Wis , June 6.

Henry Theodore Collenburg, M.D., to Miss Mary N. Stewart, both of Baltimore, June 14.

John William Brown, M.D., Bremond, Tex., to Miss Kate Laurence Adams of El Paso, June 4.

James E. Rawlings, M.D., Daytona, Fla., to Miss Madge Mogee of Norristown, Pa., May 22.

Warren Frederick Pearce, M.D., to Miss Lillian Temple Swope, both of Quincy, Ill., May 1.

Rupert Norton, M.D., Baltimore, Md., to Miss Cecilia Hendrickson in New York City, June 7.

Charles Burnside, M.D., Los Angeles, Cal., to Miss Ethel Kuhn of Audubon, Iowa, June 11.

Lee Maxwell Nance, M.D.. Dallas, Tex., to Miss Dorothy Rose of Vicksburg, Miss., June 5.

Israel Henry Chilcott, M.D., to Miss Vera Marguerite Apfel, both of Chicago, June 4.

Adolph August Passer, M.D., Olivia, Minn., to Miss Irene Monk of Minneapolis, May 15.

J. Clark Stewart, M.D., to Miss Isabelle A. Raiche, both of Minneapolis, Minn., June 4.

Thomas A. Phillips, M.D., to Miss Mary Louise Coon, both of Lyons, N. Y., June 4.

William Ralph Eddleman, M.D., to Miss Ella Reever, both of Gold Dust, Tenn., May 28.

H. Beach Morse, M.D., to Miss Marion Jean Parks, both of Bay City, Mich., May 31.

John Adams Wolfer, M.D., Chicago, to Miss Edna Ola Kunze of Detroit, June 10.

Allan N. Moore, M.D., to Mrs. Grace Holly Lee, both of Lockport, N. Y., June 4.

Samuel E. Parr, M.D., to Miss Alice Louise Strawn, both of Ottawa, Ill., June 18.

Deaths

Francis Jenks Hall, M.D. Johns Hopkins University, Baltimore, 1905; died in Peking, China, May 25, from typhus fever, aged 37. After a year in hospital work he went to China as a missionary of the Presbyterian Board, where he filled chairs in the Union Medical College and Woman's Medical College, Peking, being dean of the former at the time of his death. Dr. Hall was a Chinese scholar of great promise and at the time of his death was engaged in getting out the second Chinese edition of Osler's "Practice of Medicine."

Thomas H. Barnes, M.D. Medical College of Virgina, Richmond, 1853; University of Iowa, Iowa City, 1872; a retired practitioner of Suffolk, Va.; a former member of the Virginia legislature and of the convention which revised the constitution of the state; chairman of the board of visitors of the Medical College of Virginia, Richmond, and of William and Mary College, Williamsburg; a practitioner of Nansemond County until 1885, when he retired; died at his home in Suffolk, June 4, from senile debility, aged 82.

Roscoe Evans, M.D. Western Pennsylvania Medical College, Pittsburgh, 1889; a member of the Medical Society of the State of Pennsylvania; assistant demonstrator of anatomy and assistant lecturer on surgery in his alma mater; district surgeon of Allegheny City and assistant surgeon of the Pennsylvania System; chairman of the executive committee of the Pittsburgh School Visitors Association; died at the home of his father in Pittsburgh, June 6, from pneumonia, aged 38.

Charles H. Haskin (license, Michigan, eight years of practice, 1900); a practitioner since 1869; for four years a member and once president of the common council of Jackson; county physician of Jackson County for two terms and overseer of the poor for four years; a veteran of the Civil War; died at his home in Jackson, May 28, aged 74.

Mark W. Moore (license, District of Columbia, 1896); manager of the Law Reporting Company, Washington; first secretary of the American Federation of Labor; died at his home in Washington, May 16, from heart disease, aged 61.

J. M. Finney (license, Missouri, years of practice, 1883); died suddenly in his office in Cape Girardeau, June 1, from cerebral hemorrhage, aged 61.

George Washington Towar, M.D. Harvard Medical School, 1858; assistant surgeon of the Twenty-Fourth Michigan Volunteer Infantry and later assistant surgeon in the Army until 1882; president of the Towar Creamery Company, Detroit; died at his home in that city, May 31, from cerebral hemorrhage, aged 78.

Thomas Claude Waldron, M.D. Louisville and Hospital Medical College, 1908; a member of the American Medical Association; physician to the W. M. Ritter Lumber Company, Matewan, W. Va.; died at the Knox Creek Hospital, Hurley, Va., May 14, from abscess of the liver, aged 31.

Charles Drennen, M.D. Medical College of Albama, Mobile, 1873; of Drennens, Ala.; a Confederate veteran; for many years a practitioner; for four years a member of the common council of Brimingham; died at his winter home near Orlando, Fla., June 3, from arteriosclerosis, aged 72.

Thomas Jefferson Daniel (license, Arkansas, 1903); representative from Logan County in the Arkansas legislature in 1903 and author of the medical bill; formerly a member of the Logan County Board of Medical Examiners; died at his home in Magazine, June 4, aged 56.

John Daniel Turner, M.D. Jefferson Medical College, 1858; a member of the Medical Society of Virginia; surgeon in the Confederate service throughout the Civil War; died at his home "Orapaxe," New Kent County, June 2, aged 79.

Owen Crow Spear, M.D. Jefferson Medical College, 1906; a member of the Delaware State Medical Society; of Wilmington; died in the Delaware Hospital, Wilmington, June 3, four days after an operation for appendicitis, aged 48.

William Stroud Bolton, M.D. Tulane University, New Orleans, 1880; of El Paso, Tex.; surgeon of volunteers during the Spanish-American War with service in the Philippines; died at the Hotel Dieu, El Paso, June 3, aged 54.

William Tillman, M.D. University of Munich, Germany, 1887; formerly city physician of La Crosse, Wis., and later a practitioner of Stoddard; died at the home of his mother in La Crosse, June 4, aged 52.

A. P. Sparkman, M.D. Tulane University, New Orleans, 1861; for thirty-eight years clerk of the circuit court of Pike County, Miss.; a Confederate veteran; died at his home in Magnolia, June 2, aged 72.

Frederick Andrew Grossman, M.D. Eclectic Medical Institute, Cincinnati, 1903; at one time postmaster of Cleves, Ohio; was found dead under his overturned automobile, near Cleves, June 4, aged 56.

Lovett Taft Guerin, M.D. Starling Medical College, Columbus, Ohio, 1870; of Columbus; a veteran of the Civil War; died in Grant Hospital, Columbus, June 3, from diabetes, aged 68.

Edward C. Beach, M.D. Yale Medical School, New Haven, Conn., 1888; a member of the Connecticut State Medical Society; died at his home in Milford, June 2, from pneumonia, aged 46.

Walter August Jensen, M.D. University of Iowa, Iowa City, 1911; formerly of Melbourne, Iowa; died in the E. M. and H. E. Brown Sanitarium, Independence, Iowa, June 1, aged 35.

Leonard C. Furr, M.D. Atlanta (Ga.) Medical College, 1890; of Crandall, Ga.; died at that place, June 1, from gunshot wounds received in a pistol duel the day before, aged 50.

Herbert Whitworth, M.D. Pulte Medical College, Cincinnati, 1875; coroner, physician and health officer of Ford County; died at his home in Dodge City, Kan., May 17, aged 60.

Thomas Norvell Jefferis, M.D. Jefferson Medical College, 1886; for many years a practitioner of Mexico; died at his home in North Wilkesboro, N. C., May 30, aged 57.

George Henry P. Weeks, M.D. Hahnemann Medical College, Chicago, 1888; of Chicago; died in St. Ann's Hospital in that city, June 6, from pneumonia, aged 46.

Andrew Jackson Carpenter, M.D. Eclectic Medical College of the City of New York, 1886; died at his home in Neosho Rapids, Kan., May 17, aged 80.

J. D. A. McDonald, M.D. McGill University, Montreal, 1873; of Montreal; a well-known expert in chess; died in the Montreal General Hospital, May 31.

William H. H. McCloud (license, years of practice, Illinois, 1878); for forty-six years a practitioner; died at his home in Ridge Farm, June 4, aged 67.

James Thomson, M.D. University of Toronto, Ont., 1908; of Winchester, Ont.; died at his former home in Hastings, Ont., April 7, aged 25.

Amos B. Miller (registration; prothonotary of Berks County, Pa.); died in his home in Lancaster, June 2, *from cerebral* hemorrhage, aged 68.

Solomon Wexlar Laub, M.D. Tulane University, New Orleans, 1906; of Las Cruces, N. Mex.; died in Natchez, Miss., May 11, aged 34.

John Passmore Cheesman, M.D. Hahnemann Medical College, Philadelphia, 1879; died at his home in Swedesboro, N. J., May 7, aged 61.

George Alexander Pettigrew, M.D. University of Toronto, Ont., 1870; died at his home in Peterboro, Ont., March 4, aged 68.

Walter R. Gosewisch, M.D. Tulane University, New Orleans, 1888; died suddenly at his home in Los Angeles, May 24, aged 50.

Charles J. Wagner, M.D. Southwestern University, Dallas, Tex., 1908; of Dallas; died in Vienna, Austria, April 29, aged 26.

William S. Nelson (license, Arkansas, 1903); of Dilworth; died at Nashville, Ark., June 3, from congestion of the brain, aged 46.

John A. Lung, M.D. Cincinnati Physio-Medical College, 1849; of Chewelah, Wash.; died in Spokane, Wash., March 31, aged 89.

James S. McIntosh, M.D. Cincinnati College of Medicine and Surgery, 1867; died at his home in Covington, Tenn, May 4, aged 77.

George DeWitt Green, M.D. Hahnemann Medical College, Chicago, 1885; died at his home in Holt, Mich., May 24, aged 65.

Milo J. Gilkerson, M.D. Eclectic Medical Institute, Cincinnati, 1876; died at his home in Tekamah, Neb., April 8, aged 69.

James Howard Lott, M.D. Jefferson Medical College, 1878; of Buffalo, Wyo.; died in Hot Springs, Ark., May 26, aged 65.

Edward L. Downs, M.D. University of Maryland, Baltimore, 1886; died at his home in Butler, Pa., March 27, aged 55.

Jesse A. Eaton (license, Missouri, twelve years' practice, 1872); died at his home in Belgrade, May 6, aged 69.

Samuel M. Hardman (license, West Virginia, 1900); died at his home in Clarksburg, June 3, aged 62.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE ELECTRO-OXYGEN INSTITUTE

Fake Concern at Omaha Swindled Many People—Promoters in the Custody of Federal Authorities—Formerly Driven Out of Louisville, Ky.

Some months ago[1] we published an account of the prosecution, instituted through the local medical profession of Louisville, of the promoters of a so-called "Advanced Medical Science Institute." At that time we said that probably this concern would be heard of elsewhere. In the latter part of April there appeared in the newspapers of Omaha outrageous advertisements of an "Electro-Oxygen Institute." This concern had a career of but two or three weeks, during which time, however, many people of Omaha and vicinity were swindled. It will be remembered that the chief promoter of the "Advanced Medical Science Institute" of Louisville was one X. W. or H. W. or Z. T. Witman. This is the man, as developments proved, who, together with his wife and Dr. E. D. Brantley, was promoting the Omaha fake.

In their newspaper advertising at Omaha they claimed to have their office equipped with $12,000 worth of wonderful electrical apparatus, including a $5,000 "electro-oxygen" machine, with which, in conjunction with the "famous Fredman serum," as they expressed it, they claimed to cure tuberculosis, and published alleged testimonials of patients to that effect. They also claimed to cure Bright's disease, diabetes and cancer, besides a host of other things, and did not hesitate to quote alleged statements from well-known medical men to the effect that surgery was a failure in such diseases as gall-stones and appendicitis, and that the electro-oxygen treatment was the only effective one. The impression given in their deceptively worded advertisements that they used the Friedmann serum for the treatment of tuberculosis brought dozens of patients to their offices. Knowing that their deception would soon be found out, after a large sum of money had been taken from the patients they closed the offices and departed without leaving any information as to their destination. Complaints of patients put the local and the United States authorities on their trail and they were located in Denver. Before they could be arrested, however, they again fled. Information that Dr. Brantley had returned to his former home, Memphis, resulted in his arrest in that city and from him it was discovered that Witman and his wife had found a "promising field" in Colorado Springs, where they also were arrested. The charge against them was using the mails to defraud. They were held in bail pending trial in the United States Court at Omaha.

Correspondence

Where Is the Fundus of the Bladder?

To the Editor:—In view of the article by Dr. Lewis in The Journal (June 7, 1913, p. 1765) on "Where Is the Fundus of the Bladder?" may I ask what part of the bladder would Dr. Lewis call the base or bottom (fundus) in a man standing on his head, or lying down, or in a quadruped?

What part would he call the base or bottom of a cylindrical bottle, in whatever position it might be? How many sides has it, and if more than one, how delimit them?

What is the base or bottom of a pyramid, though standing on its apex?

To apply the term "summit" or "vertex" to the bottom of a bottle or a bladder, seems to me quite as much out of place as to apply the term "vertex" to a breech presentation.

M. E. Woodling, M.D., Las Vegas, N. Mex.

[The preceding letter was submitted to Dr. Lewis, who replies:]

To the Editor:—I can see no force whatever in your correspondent's question. The fact that a person's bladder is turned upside down when he stands on his head does not change the name of the several parts of the bladder any more than it changes the person's name for him to go to bed. "Fundus of the bladder" means a certain part of the bladder, namely, the base of the bladder.

Bransford Lewis, M.D., St. Louis.

Fee-Splitting Places a Premium on Poor Surgery.—Fee-dividing in any form that is practiced is characterized by the *Journal of the Indiana State Medical Association* as "a dishonorable traffic in the ills of humanity. Followed to its logical conclusion it means the sale of the patient to the highest bidder. It can be nothing more than the rankest commercialism when general physicians seek a fee-divider, and usually the one paying the largest commission, to whom patients are to be referred. In a general way the question of ability is not considered, and the embryo surgeon without education, training or experience can and does do a large surgical practice if he pays well for the services of the members of the steering committee. The unfortunate patient who has placed his trust in his family physician is not consulted." In an editorial note the *Journal* says that fee-dividing is a crooked deal between surgeon and general physician, with the patient as "the goat."

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[1] Propaganda for Reform, The Journal A. M. A., Dec. 21, 1912, p. 2273

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

CORROSIVE SUBLIMATE POISONING

To the Editor:—In cases of poisoning by swallowing a tablet of corrosive sublimate, would it not be worth while to open the stomach promptly and deal locally with it? It might be found that the tablet had expended its corrosive influence on one or two spots which could be excised, with, perhaps, most of the poisonous substance.

I believe it is the local destruction, not the systemic poisoning, that kills the patient. In 1889 I treated a case in which a corrosive sublimate tablet had been used hypodermatically by mistake, and, although it produced local gangrene and a deep slough, there were no constitutional symptoms. In poisoning by swallowing large quantities of arsenic, too, as in "Rough on Rats," I have seen patients show no poisoning, but only gastritis, when the stomach has been emptied in a reasonable time. It may be found that these tablet cases may be best treated by the surgeons.

J. Emmet O'Brien, M.D., Scranton, Pa.

Answer.—Such poisons as arsenic and mercuric chlorid sometimes act very rapidly. Thus arsenic has been fatal in twenty minutes and mercuric chlorid at the end of half an hour. It is probable that the fatal mischief would be likely to have occurred before a patient could be made ready for operation.

The first thing to do in a case of poisoning, if possible, is to give an antidote; the next is to empty the stomach. In corrosive sublimate poisoning the antidote is white of egg, which should be given in not too great quantities since an excess may redissolve the precipitate at first formed. As soon as the antidote has been given the stomach should be emptied, preferably by the stomach-tube. In case the stomach-tube is not available copious draughts of milk containing emetics should be given.

Dr. W. H. Allen, Ph.G., Detroit, suggests as an antidote for poisoning by swallowing bichlorid tablets, the use of hydrogen sulphid or sodium sulphid, which will result in the formation of black mercuric sulphid which is insoluble in hydrochloric acid.

VALUE OF SALVARSAN IN THE SIGNIFICANCE OF WASSERMANN REACTION

To the Editor:—1. Do you consider a faintly positive Wassermann reaction, and ability to stand four injections of neosalvarsan of 0.9 gm. each, without great disturbance, and about three weeks apart, to be conclusive evidence of syphilis in one who has never had any of the cardinal symptoms of syphilis, such as angina, an eruption, enlarged lymphatics, loss of hair, chancre, etc.?

2. Does the mere fact that one can assimilate the salvarsan, even if a Wassermann is negative, indicate syphilis beyond a doubt?

3. What is a faintly positive Wassermann and what does it signify?

4. Could the disease be hereditary after 50 years, with no previous symptoms, and then give a Wassermann reaction? If so, would the use of salvarsan be proper?

E. F. Fish, M.D., Milwaukee, Wis.

Answer.—1. Yes.

2. No.

3. A positive result in the Wassermann reaction is indicated by the fact that no hemolysis of the blood-corpuscles used occurs. If a partial hemolysis only occurs, the reaction might be considered faintly positive; if complete hemolysis occurs, the reaction is negative. The failure of complete hemolysis would indicate that some factor was prohibiting its occurrence. If the conditions in the test have been carefully carried out, a partial hemolysis indicates the probability of a specific inhibition of the hemolytic action. Such a case would be suspicious of syphilis, but the evidence would not be conclusive.

4. While it is very improbable that a hereditary syphilis would remain to the age of 50 without producing symptoms, it cannot be regarded as impossible. Unless contra-indicated by the condition of the patient salvarsan would be proper treatment for any case of syphilis.

RIGGS' DISEASE

To the Editor:—1. Please give recent literature and books on the subject of Riggs' disease.

2. Are there other diseases similar to this that attack the gums?

Frederick Booth, Michigan City, Ind.

Answer.—1. The following books and articles treat of the subject:

Pickerill, H. P.: Stomatology in General Practice, Oxford University Press, New York, price $5.50.

Talbot, E. S.: Interstitial Gingivitis, Ransom and Randolph Co., Toledo, Ohio, price $4.00.

Noguchi, H.: Treponema Mucosum (new species) Mucin-producing Spirochete from Pyorrhea Alveolaris, *Jour. Exper. Med.*, August, 1912; abstr., The Journal, Aug. 17, 1912, p. 577.

Medalia, L. S.: Chronic Pyorrhea Alveolaris, *Boston Med. and Surg. Jour.*, Dec. 12, and Dec. 26, 1912.

Chapman, C. H.: Pyorrhea Alveolaris, *West Virginia Med. Jour.*, October, 1912.

Wood, J. H.: Biologic Therapeutics in Pyorrhea Alveolaris; Autogenic Method, *Kentucky Med. Jour.*, July 1, 1912.

Best, V. G.: Pyorrhea Alveolaris, *Dublin Jour. Med. Sc.*, February, 1912.

Glynn, E.: Vaccine Treatment with Special Reference to Pyorrhea Alveolaris, *Med. Press and Circular*, Jan. 17 and Jan. 24, 1912.

Briggs, E. C.: Interstitial Gingivitis, *Boston Med. and Surg. Jour.*, Aug. 31, 1911.

Williams, W. R.: Vaccine Therapy of Pyorrhea Alveolaris, *Am. Jour. Med. Sc.*, May, 1911.

2. Various poisons, as well as such diseases as scurvy, produce a softening and inflammation of the gums, but they have not the same characteristics as pyorrhea alveolaris (Riggs' disease).

TYPHOID MORTALITY

To the Editor:—Please state what percentage of typhoid-fever patients died fifteen or twenty years ago, and what percentage dies at the present time. I do not think that it is so successfully treated now as it was fifteen years ago.

W. G. Hendrix, M.D., New London, Mo.

Answer.—A table is given by Hare in his "Practice of Medicine" showing the mortality in Philadelphia from 1888 to 1902. According to this table the mortality twenty-five years ago was 21 per cent.; twenty years ago it was 19 per cent.; in 1898 (fifteen years ago) it had fallen to 11 per cent., and in 1902 it was approximately at the same figure.

The case fatality rates for the city of Washington, reported for the eight years 1903 to 1910, inclusive (*Bull. Hyg. Lab.*, U. S. P. H. S., 78, October, 1911) were as follows: 1903, 12.98 per cent.; 1904, 14.01 per cent.; 1905, 12.94 per cent.; 1906, 14.4 per cent.; 1907, 12.0 per cent.

RADIUM IN ARTHRITIS DEFORMANS

To the Editor:—1. Can you refer me to literature on the use of radium in arthritis deformans?

2. Are any radium preparations given by hypodermic injection?

Charles J. Foote, M.D., New Haven, Conn.

Answer.—1. The following articles on the use of radium may be referred to:

Gudzent, F.: Radium Emanations in Treatment of Arthritis and Gout, *Berl. klin. Wchnschr.*, Nov. 20, 1911; abstr., The Journal, Dec. 23, 1911, p. 2111.

His, W.: Treatment of Gout and Rheumatism by Radium, *Brit. Med. Jour.*, Feb. 4, 1911; abstr., The Journal, March 4, 1911, p. 700.

His, W.: Radium in Gout and Rheumatism, *Berl. klin. Wchnschr.*, Jan. 30, 1911; abstr., The Journal, March 4, 1911, p 782.

Kemen: Radium Therapy of Chronic Articular Rheumatism, Gout and Sciatica, *Petersburg med. Ztschr.*, Feb. 28, 1912.

2. According to the article of Gudzent, solutions of radium salts are sometimes injected in the neighborhood of diseased joints; more commonly the preparation used is a solution of the radium emanation.

THE TRANSMISSION OF RECURRENT FEVER BY THE LOUSE

To the Editor:—I was much interested in your editorial in The Journal, May 24, p. 1647, on "The Transmission of Recurrent Fever by the Louse." Does this work invalidate that done by Dr. Robert Koch (*Berl. klin. Wchnschr.*, 1906, p. 183) on African recurrent fever and the tick *Ornithodorus moubata?*

M. D.

Answer.—There seems to be a distinct difference between the ordinary relapsing, or recurrent, fever and the African recurrent fever, on which the observations of Koch, referred to, were made. It is probable that the diseases are transmitted by different insects.

ALCOHOL INJECTIONS FOR TRIFACIAL NEURALGIA—NEOSALVARSAN

To the Editor:—1. Please give references, or information relative to the injection of alcohol for the cure of trifacial neuralgia.

2. What is the present status of neosalvarsan as a curative agent in syphilis? Is it considered safe when given intravenously?

J. M. J.

Answer.—1. A list of references to articles on this subject was published in The Journal, Sept. 21, 1912, p. 960.

2. Neosalvarsan is generally considered as equivalent to salvarsan in its effects.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

A HANDFUL OF EDITORIALS

There is perhaps nothing which reflects the real sentiment of the public so accurately as the editorial columns of the daily newspaper. The advertising pages may be and often are influenced by financial considerations. In very few cases can the editorial utterance of a newspaper be bought. The views expressed stand for the personal opinion of the editor, expressed in a manner which will in his judgment meet the approval and support of a majority of the readers. From the editorial pages of any large number of newspapers, therefore, one can form a pretty accurate idea of the views of the average citizen.

To one who has been watching the campaign for better health legislation, there is no one fact more striking than the marked increase in public interest as shown by the increasing amount of space devoted to the discussion of health matters in the newspapers, and the growing demand for greater governmental activities for the prevention of disease. Of the many editorials on health topics, quotations from only a few of the more striking are possible.

The York (Pa.) *Daily*, in a lengthy editorial on the Panama Canal and its value as an object-lesson, says:

> "Nowhere and never in the world's history has there been such triumph of men over the forces of Nature. This applies to disease-producing agencies as well as to mechanical conditions. Let the public not forget when they think of the Panama Canal that underlying the surface of this enormous governmental work is the minute and painstaking investigation in the recondite cause of disease, in the little laboratories where men are hidden from public observation and where they concern themselves with the study of disease germs and culture methods and the use of the microscope. And let them not forget also that the heroism displayed by those who have lost their lives in this sort of study is equal to any heroism displayed on the battle-field, or anywhere else. In fact it is superior to it, because it concerns men giving deliberately, from stern conviction of duty toward others, and it is devoid of the glamor and applause which come to men who are in the public eye. All praise, then, to the men who, like Dr. Walter Reed of the United States Army, and others, have sacrificed themselves in the attainment of knowledge, which is now the property of the world at large."

The New York *Sun* has long taken advanced ground on public health questions. Discussing "The Education of Our Physicians," the *Sun* says:

> "The American Medical Association, which stands for all that is best and highest in every department of the physician's life work, is an organization the like of which does not exist elsewhere, combining the most scientific zeal in its membership with executive ability of the highest type in its management. We have recently referred to the Council on Pharmacy and Chemistry, which under its direction carries on an unrelenting warfare against quackery within and without the profession. While we are not always in accord with its policy in minor matters, the course of THE JOURNAL of the American Medical Association is commendable in the essentials."

After commenting on the work of the Council on Medical Education, the editorial continues:

> "Medical legislation should recognize no sect or school and should demand the same knowledge of the principles and practice of medicine from all applicants for license. The examiners should be experts in their branch and be well paid, and not be chosen from the medical schools. When the average legislator can be induced to recognize the importance of health to his constituents the latter will be protected. Medical education is as important as sanitation."

In Pittsburgh, Pa., a systematic campaign against quackery has been going on. The Pittsburgh *Sun* recently commented on "Quacks and the Public." It said:

> "The exposé and punishment of quack doctors now going on in this city should not be without a wholesome influence on the public, too. While in cases of desperate sickness it is natural to 'take chances' on anything offered for relief, still in many of the instances in which the people have been defrauded it has been their gullibility rather than their desperation that has led to their being victimized. They have taken the word of strangers in preference to that of the reputable doctors who have lived among them for years. They are also able to find the money to pay the quacks—the latter have no time to waste on them if they aren't—whereas the genuine physicians have repeatedly worked to relieve suffering and save lives with the full knowledge that they probably would never get a cent for it. The people should think too much of their lives and their health to entrust them to strangers or persons without proved reputations for knowledge, skill and honesty. Read and ponder: Who are performing the great operations and effecting the remarkable cures? The quacks? Of course not. Then why waste any time with a quack when you are sick?"

The *Sun* editorial has summed up the whole question. Who are the men who are making the advances in our knowledge of disease and its prevention? The "advertising specialist," the "patent-medicine" faker, the "new thought" devotee? If not, what claim have they on public confidence in time of need?

The South Fork (Pa.) *Record* is evidently not impressed with the arguments of the reactionaries. It devotes two columns to expressing its views. All of it is good, but only a part can be quoted. Under the title "The Family Doctor and the Medical Trust," the *Record* says:

> "During the last week the Johnstown papers have given much space to attacks on the American Medical Association, or, as they are pleased to call it, 'the medical trust,' which have a tendency to mislead the public or at least make them forget for a time, usually a very short time, their good old 'family doctor.' It is said that the 'stuff' referred to has been running as paid advertising but it has not been marked as such and therefore one cannot be blamed for holding the opinion that it is printed as news or opinions of the various editors. Why they take such a stand is another matter. The charges contained in these articles are too absurd to repeat except that they intimate that all doctors affiliated with the American Medical Association are banded together to hoodwink suffering humanity. If such were the case this country would be in a sad state of affairs."

It would, indeed; but how passing strange that the dark and subtle method followed by the "medical trust" and its members to "hoodwink suffering humanity" is to encourage the growth of knowledge by which disease can be prevented and eliminated!

The *Record* is frank in acknowledging its point of view on "ethics." It continues:

> "The charges deal also with 'ethics' and in this connection we will readily admit that we often get out of patience with the so-called 'code'; but that is because we are a seller of advertising which the ethics forbid the physicians to buy. In South Fork, however, the editorial policy is not controlled by the business office and whether it bankrupts us or not we feel it a duty to say a word in defense of that great man who sacrifices more money, more pleasure and more energy for mankind than any other—the family doctor."

After discussing the family doctor, the development of medical knowledge and the growth of specialists and special knowledge, the *Record* concludes:

> "The American Medical Association is responsible for laws that make it hard for the incompetent to hang out their shingles. It is responsible for such laws as have been passed compelling the manufacture of pure food. It is responsible for the laws that prohibit the sale of medicines containing opium, alcohol or other harmful drugs without the contents being plainly stated on the label. It is responsible for many reforms along this line that have proved a boon to humanity, and that is why it is called the medical trust."

Book Notice

The Principles and Practice of Obstetrics. By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics at the Northwestern University Medical School, Chicago. Cloth. Price, $8 net. Pp. 1060, with 913 illustrations. Philadelphia: W. B. Saunders, 1913.

This new treatise, one of the most elaborate of text-books on obstetrics offered to the profession in recent years, is based on the author's "Notes." The needs of the general practitioner and of the student are constantly held in view, the direct relation of purely scientific subjects to daily practice being clearly emphasized. Again the practitioner requires considerable detail and abundant illustration, and this the author provides. The essentials are presented in large type, the less important matter in smaller type. Operative procedures are described briefly, but full explanation is set forth beneath the many illustrations depicting the operation in successive steps. Hence, in emergency, the reader may obtain a fair idea of the methods described from the pictures alone.

The author has borrowed from familiar plates with due acknowledgment. To Bumm in particular is gratitude expressed. The material for most of the drawings, however, came from the Lying-In Hospital service.

In the arrangement of the text, the conventional order is followed. The physiology of pregnancy, of labor and of the puerperium occupy the first three sections. The changes of menstruation and the development of the decidua and of the placenta are unusually well set forth. The mechanism of labor is covered in elaborate detail.

The child is first considered in the section devoted to hygiene and conduct of pregnancy and labor. The author says that the time has come for the practical application of eugenics. The influence of premature labor on skeletal and genital development, of bottle feeding on the general physical and mental growth and of the acute infectious diseases as factors in the subsequent organic deficiencies is emphasized, all with regard to rearing the infant girl from the point of view of her future pregnancy and labor. The author's instructions to his own patients during pregnancy and to the nurse are reproduced, as is his list of articles for the obstetric satchel. While strongly advising a properly equipped maternity hospital he gives adequate directions for the conduct of labor in the home. Here he requires the aid not only of the nurse but also of an assistant physician. "Every labor case should have two physicians. The duties of the assistant are first, to watch the fetal heart-tones so that if the child should show signs of exhaustion or asphyxia it be recognized in time and the frequency of stillbirths be thus diminished; second, to keep an accurate history of the labor; third, to care for the patient in the first stage while the accoucheur is attending to other work, or obtaining the rest he will need for the proper conduct of the second and third stages. . . . If obstetrics is ever to obtain the dignity of surgery—and it should—if the parturient woman is ever to enjoy the same benefit as the surgical patient — and she deserves them — the accoucheur must be given sufficient help and the makeshift policies of obstetric practice must be abolished."

In delivery, when lacerations seem inevitable, a deep episiotomy is practiced, wisely deep when used at all. A 1 per cent. solution of silver nitrate or a 25 per cent. argyrol solution is invariably employed in the eyes of the new-born, the author favoring universal legislation to enforce prevention of ophthalmia neonatorum.

The second half of the volume is given over to considerations of pathologic obstetrics. In the toxemias of pregnancy thorough search of the recent literature as well as close clinical observation is evident. In the treatment of eclampsia the author strongly favors prompt delivery when, indeed, he does not terminate pregnancy prematurely, the preeclamptic condition not yielding to treatment. Venesection is favored but is reserved until after delivery, as the loss of blood at birth may be sufficient.

In inevitable abortion tamponade of the cervix and vagina is advised, followed by curettage in all cases, often simply to gain assurance that no remnants are left. The same method is followed in incomplete abortion. On the other hand, in septic abortion, curettage is as strongly avoided, and only when hemorrhage renders it necessary is the tampon employed to empty the uterus. Only after septic symptoms have subsided are placental masses removed by the finger or ovum forceps.

In the treatment of placenta praevia by version emphasis is well placed on the point that extraction should not immediately follow. The rubber bag is used within the fetal sac and is preferred to the gauze or cotton tampon. Cesarean section in placenta praevia centralis will be rare, the author believes, if all proper conditions are met, such as pregnancy at or near term with mother and child both in good condition and the cervix closed or difficult to dilate, with adequate hospital facilities and an operator "capable of his task."

In a detailed discussion of the contracted pelvis, the clinical aspect is emphasized. In general, expectancy is repeatedly urged when operative procedures are under consideration, and throughout the author shows the influence of Schroeder and of the later Vienna school.

At times, by way of avoiding polemic discussion, a dogmatic attitude is observed. This characteristic is no better displayed than in the treatment of uterine rupture, in which the following occurs: "Under no circumstances may a woman threatened with rupture of the uterus be transported to a hospital." In treatment the author's experience leads him to favor drainage of the peritoneum and the tear, laporatomy being done only to meet special indications. In some cases the rupture may be repaired in whole or in part from below. The discussion of the pathology of the puerperium is given over to a thorough consideration of puerperal infection and to diseases of the breast. A careful general examination preceding all operations and a local one following is made an invariable rule. Preparatory operations comprise the various methods of opening the cervix and those of enlarging the bony pelvis. The incision for vaginal hysterectomy and the Doederlein method of performing hebosteotomy are described in minute detail. Contrary to the teaching of other obstetricians, infection is held to be a contra-indication of thus enlarging the bony pelvis. Indications and conditions for forceps extraction are well formulated, and this instrument is described as a rotator or a lever, simple traction being the dominant function. Laceration of the vagina and avulsion of the bladder are the things to be feared in rotation with the blades. Hence in deep transverse arrest the forceps are applied first obliquely to both head and pelvis. After rotation by traction is completed the case is left for spontaneous expulsion. In occipitoposterior positions the author prefers to extract as the head rotates spontaneously, either posteriorly or permitting anterior rotation if this occurs. The Scanzoni-Fritsch method he has seldom found preferable. His first choice here, as in face and brow presentation, is to attempt manually to change the position of the head, rotating from posterior to anterior or flexing the head, as the case may require. It would appear that he finds these maneuvers less difficult to perform than do many operators, even though rotation may require that the engaged head be almost totally disengaged. Again showing the influence of the Vienna school, the author is not an enthusiastic exponent of the axis-traction instrument. In his own hands he plainly prefers the simple Simpson forceps, considering axis-traction as not artistic and the Tarnier model as capable of great danger to both mother and babe. The place of inlet forceps extraction as a major operation and its dangers are well set forth. A brief chapter on the induction of premature labor and an appendix covering a few points in technic complete the volume.

From the student's point of view the subject-matter is well arranged and the frequent phrase "my own experience," shows the work to be as much one man's as it is a collaboration from the writings of many. Often a subject is concluded with a short concise summary, another feature that appeals strongly to the crowded student or the hurried practitioner. Lengthy bibiliographies have been avoided, but sufficient recent references are given to aid the reader in his deeper library research.

Medicolegal

Malpractice Liability Extended by Concealment

(Groendal vs. Westrate (Mich.), 137 N. W. R. 87)

The Supreme Court of Michigan reverses a judgment for the defendant on a directed verdict in this action for malpractice where the point on which a verdict was instructed was that the right of action was barred by the statute of limitations. The court says that the statute in force at the time this cause of action arose provided that all actions for malpractice against physicians and surgeons should be commenced within two years after the cause of action accrued, but the plaintiff, in instituting her suit more than two years after the right of action accrued to her, relied on the provisions of section 9739 of the compiled laws of 1897, which reads: "If any person who is liable to any of the actions mentioned in this chapter shall fraudulently conceal the cause of such action from the knowledge of the person entitled thereto, the action may be commenced at any time within two years after the person who is entitled to bring the same shall discover that he has such cause of action, although such action would be otherwise barred by the provisions of this chapter."

The plaintiff, who was a heavy woman, had, on May 1, 1906, while at work in her home cleaning the stairs leading to the second story of the house, fallen from the top step and suffered a subglenoid dislocation of the left humerus. The defendant was called and attended her within about half an hour after the accident, and was informed how it occurred, but stated that the arm was not out of joint or broken; that it was just stretched and bruised, and he took no steps to reduce the dislocation, but simply bandaged the arm and treated it with liniment.

The case made by the plaintiff showed: First, the relation of physician and patient, which, of itself, begets confidence and reliance on the part of the patient. This relation had existed for a term of years, and during that time she had had no other physician. They were fellow countrymen, and conversed together in their native tongue. She was ignorant and unlearned, and relied on him and believed that he told her the truth. She maintained her trust in him until April, 1909. It was not a mere silence on the part of the defendant which was relied on. He repeatedly told the plaintiff that her arm was not broken or dislocated. Under the circumstances of the case the question of her diligence to discover her condition was one of fact, to be submitted to the jury.

Whether the defendant first knew of the dislocation of the plaintiff's shoulder when he was first called to attend her, or discovered it later, when it was too late to reduce it, was of no consequence.

Relation of Physician and Patient Existed and Question of Malpractice for Jury

(Coss vs. Spaulding (Utah), 126 Pac. R. 468)

The Supreme Court of Utah reverses, with directions to grant a new trial, a judgment rendered on a nonsuit granted on the defendant's motion. The court says that the evidence introduced by the plaintiff, a boy 12 years of age, tended to show that about 2:30 o'clock one afternoon he was run over by an automobile and the tibia of the right leg broken. The driver of the automobile took him home and told his mother that he thought his leg was broken, and offered to procure a physician. The mother replied that, on account of the nervous condition the plaintiff was in, she did not want a physician called just at that time. The driver gave the plaintiff's mother the telephone number of his employer, a Mr. Purdue, and requested her to call his employer whenever she wanted a physician, and that he would send her one. The plaintiff's mother testified that that evening her husband called up Mr. Purdue, who said he would send his physician. The next morning he brought the defendant, and she stepped up, and he said, "I am Mr. Purdue, and this is my physician, Dr. Spaulding." Dr. Spaulding examined the leg, and when she asked him if it was broken, he said, "No." He gave a prescription for liniment and said to get a mud poultice and put that on to get the soreness out, that the leg would be all right in a few days.

The defendant insisted that the evidence failed to show that the relation of physician and patient existed between him and the plaintiff. But the court is clearly of the opinion, from the evidence adduced, that the relation of physician and patient existed. The defendant not only called on and examined the plaintiff for the purpose of determining the character and extent of the injury, but after the examination was completed he prescribed for the plaintiff and gave directions to his mother, who was caring for and nursing him, regarding the treatment he should receive at her hands for the injury.

It was further contended that the plaintiff could not recover damages from the defendant because neither he nor any one authorized to act for him employed the defendant to perform the services in question. It was conceded, however, that the defendant was employed by Mr. Purdue, and that under the contract of employment he, on the occasion referred to, examined and prescribed for the plaintiff's injury. The defendant, therefore, was under the same legal obligation to the plaintiff to use ordinary care and skill in his examination and treatment of the injury as he would have been under if the plaintiff or the plaintiff's mother had employed him to perform those services. It was to recover damages for an alleged breach of this legal duty that this action was brought. The action, therefore, was not based on contract, as the argument of counsel for the defendant seemed to imply, but on tort. Under the great weight of authority, the question of whether the plaintiff, his guardian, or some third party employed the defendant to perform the services was wholly immaterial. Even though a physician or surgeon renders his services gratuitously, he cannot escape liability for his negligent or unskilful treatment of his patient.

The court is of the opinion, and so holds, that the question of whether the defendant used ordinary care and skill in his diagnosis and treatment of the plaintiff's injury should have been submitted to the jury.

Acceptance of Warrant for Part of Claim Precludes Recovery of Balance

(Paulson vs. Ward County (N. D.), 137 N. W. R. 486)

The Supreme Court of North Dakota holds that in this action, brought by a physician to recover a balance claimed to be due for professional services and supplies furnished by him for the support of the poor of the county, it was error to overrule a demurrer interposed on the ground that the complaint did not state facts sufficient to constitute a cause of action. The complaint recited the performance of services and the furnishing of supplies of the total reasonable value of $750, and that bills in due form of law, duly verified and approved by a commissioner of the board, were presented to the board of county commissioners of the county for their consideration, and, after mutilating the bills, the board allowed the plaintiff $265 only, wherefore he asked judgment for $750, less a credit of $265. If this action were between private parties the court would have no hesitancy in holding the demurrer not well taken, as it would not sufficiently appear that the partial payment received was under an agreement that the same should be in full for the claim and so constitute an accord. But where unliquidated claims against a county are duly presented to its board of county commissioners for allowance, and the claims are considered together and allowed at a lump sum less than the amount claimed and a warrant is drawn for the amount so allowed, which warrant is accepted by the claimant, such acceptance is presumed to be in full payment of the claims presented. The claimant cannot accept such a warrant and credit the amount thereof on the total of the claims presented, and then sue for the balance rejected. He must repudiate the allowance and submit his claim as a whole to the courts, or accept the warrant in full payment.

Society Proceedings

COMING MEETINGS

Maine Medical Association. Portland, July 2-3.
Washington State Medical Association, Everett, July 14.

AMERICAN SURGICAL ASSOCIATION

Annual Meeting held in Washington, D. C., May 6-8, 1913

(Concluded from page 2026)

Diagnosis and Treatment of Border-Line Pathologic Lesions

DR. JOSEPH C. BLOODGOOD, Baltimore: By border-line pathologic lesions are meant those in which it is difficult, clinically, or from the gross appearance, or from the frozen microscopic section, to come to a definite conclusion as to whether a lesion is benign or malignant. The earlier after the first symptom patients present themselves for treatment, the greater will be the number of cases in which the diagnosis will present difficulties; in this stage the prognosis after proper treatment is best. We have sufficient experience at present to allow us to formulate definite conclusions as to the proper method of diagnosis and treatment in this stage, in which the result should be the best. Incomplete removal of any malignant disease in its earliest stage gives much worse results than complete removal in a later stage. Incomplete removal of a distinctly benign lesion, with the exception of angioma, is always followed by the reformation of the tumor from the residues left behind, and the chances of malignant change in these residues are greater than in the undisturbed benign lesion; this fact also should be kept in mind.

The surgeon must have the easily available knowledge of the different pathologic processes which may occur in definite localities. He must be familiar with the methods of diagnosis of the lesion in this special region and the nature and extent of the operation which promises the best results. The diagnosis as to the proper treatment rests on, first, a careful study of all the available clinical evidence. In some cases this is sufficient to indicate the proper treatment without a gross or microscopic investigation. I think that this is true for palpable masses in the stomach and colon. The resection of such masses, without an investigation of their gross and microscopic pathology by cutting into them, yields the best results with the least mutilation and danger. If the pathologic examination after their removal shows a benign lesion, the patient is protected from the later development of cancer; if, on the other hand, it should prove to be malignant, the chances of a cure are best.

The next important question to answer is, What shall a surgeon do when in doubt after he has exhausted clinical, and gross and microscopic pathologic investigation? The answer to this question rests on the knowledge of the frequency of malignant disease in the different regions and the results of radical treatment. In the breast, the complete operation for cancer should always be performed for any lesion in a woman over 25 unless the benignity of the lesion is established. The complete operation should follow immediately on the exploratory incision. This conclusion is based on the fact that the mutilation of the complete operation is but slight, and the additional danger is little, if any, while the probabilities of a cure of the malignant tumor subjected to complete operation in this doubtful stage is 80 per cent. or more; if the operation is done in two stages the chances of a cure are reduced to almost nothing. In bone lesions the mutilation of amputation is so great and the chances of a cure of any doubtful lesion should it prove malignant are so slight that the most conservative operation should always be chosen. This is also true for doubtful lesions in the nasopharynx and antrum, on the alveolar border of the jaws, and in the body of the lower jaw.

If surgeons will carefully investigate these lesions clinically, scrutinize their gross appearance and look at the frozen sections, and keep a check on their results up to date, they will soon be in a position to meet the requirements of the diagnosis of these border-line pathologic lesions, inasmuch as immediate treatment based on this investigation will lead to a removal of the lesion, giving the patient the best opportunity of a cure with the least mutilation and danger. If the campaign for the education of the people on the early signs and symptoms of what is or may be cancer bears fruit, surgeons will be called on more and more to treat these lesions in a stage in which accurate diagnosis is more difficult and when the dangers of incomplete removal following an inaccurate diagnosis increase with the space of time between the first signs and symptoms of the disease and the date of treatment.

DISCUSSION

DR. JOHN B. MURPHY, Chicago: The final court of appeal in these cases is the clinical result and not the microscopic report.

DR. CHARLES H. MAYO, Rochester, Minn.: In border-line pathologic lesions in which an exploratory operation cannot immediately, if necessary, be followed by diagnosis from a frozen section, the wound, even though the condition be considered benign, should be packed with Harrington's solution No. 9 for several days until a microscopic report can be obtained. Do not close such a wound; leave it open and drain, and burn the lymphatics with hydrochloric acid.

DR. ARPAD G. GERSTER, New York: There is the possibility of tumors in the breast being either of tuberculous or syphilitic origin, therefore not requiring amputation. Involution mastitis based on gout, actinomycosis in the breast, and various systemic disorders may be accompanied by swellings in the breast, emphasizing the point that not all swellings in the breast are necessarily on their way to malignancy.

Exclusion of the Bladder; an Operation of Necessity and Expediency

DR. CHARLES H. MAYO, Rochester, Minn.: The best method of disposing of the secretion of the kidneys in patients in whom it is necessary or expedient to exclude the bladder, remains still one of the serious problems of surgery. To say, however, that the modern methods of operation in these cases expose the patient to greater danger from infection than is compensatory with the mitigation of his suffering, considering the natural mortality of the disease, is not consistent with the history of the patients or the records of the progress of surgery. The best theoretical and practical anastomoses of the ureter with the large bowel are those which permit the ureters to traverse some distance between the mucosa and outer wall of the bowel before penetrating its lumen, or are infolded by the wall of the bowel for a certain distance; also the method which transposes the base of the bladder to make it a part of the rectal wall. The control against regurgitation is due to its closure by compression in the wall of the bowel. In eight cases of cancer, transperitoneal resection of large areas of the bladder was done, with transplantation of the ureter to the opposite side. In three cases of cancer the bladder was completely removed. In four cases of exstrophy the ureter was transplanted to bowel. No deaths.

DISCUSSION

DR. FRANCIS S. WATSON, Boston: In one case I established a permanent renal fistula in the loin by nephrostomy sixteen years ago, doing the same operation on the opposite side nine years ago, and during these many years, with the exception of four months, the patient has been kept perfectly dry, free from odor, comfortable and in excellent health. I devised an apparatus for receiving the renal drainage. Nephrostomy is superior in results to ureterostomy A drainage-tube inserted into the kidney should be carried just within the entrance of the calyx into the renal pelvis, and care should be taken to avoid having it press too hard against the wall of the renal pelvis lest it cause ulceration; this drainage-tube should be of large size, which might make it necessary to stretch or enlarge the mouth of the calyx where it joins the renal pelvis.

DR. HARRY M. SHERMAN, San Francisco: I wish to report the progress in a case in which I did the Petersen operation for exstrophy of the bladder in a child aged 3 about twelve years ago. The patient has developed most satisfactorily. Five years ago he was operated on for inguinal hernia, and it was most interesting and instructive to find that even with the absence in this case of the pubic bone the anatomy of the hernia had still been preserved. At this operation I investigated the condition of the ureters in the rectum and found them in excellent condition and with no indication of an ascending infection.

Dr. Robert G. Le Conte, Philadelphia: Experimentation has shown that the extension of infection upward is not through the lumen of the ureter but by means of the lymphatics along the course of the ureter. The longer the anastomosis or the more ureter covered by intestine in implantation into the intestinal wall, the greater the liability to ascending infection.

Dr. John J. Buchanan, Pittsburgh, Pa.: We must consider the possibility of ascending infection being due to the fact that the cut end of the ureter is in reality the cut end of a mucous canal, which contracts, causing dilatation of the ureter and pelvis of the kidney, and thus predisposing to infection. I believe that before one can intelligently deal with this question, it will be necessary to learn what effect is produced on the patient by injection into the rectum of large quantities of the patient's urine prior to operation.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

June, V, No. 6, pp. 425-500

1 *Infantile Cerebrocerebellar Diplegia, of Flaccid, Atonic-Astasic Type. L. P. Clark, New York.
2 *Papulonecrotic Tuberculides in Infants. B. M. Wronker, New York.
3 Pathogenesis of Casein Curds in Stools of Infants. A. F. Hess, New York.
4 Diagnostic Value of v. Pirquet Test. F. L. Wachenheim, New York.

1. Infantile Cerebrocerebellar Diplegia.—Clark summarizes his paper as follows:

> We have here under consideration an extreme defect disease of the cerebro-cerebellar function with relationship to bodily movements, of an unknown pathogenesis (*probably based largely* if not solely on a developmental defect) which is for the most part intrauterine in origin and which we find expressed in clinical manifestations of atonia, astasia, hypotonia, mutism and idiocy. We believe it constitutes a distinct type of palsy of infancy. The *disorder* not only affects isolated movements, but particularly the association of movements or the motor synerges so-called. The movements by themselves as shown in the type are not incoordinated as in *tabetics*, but are characterized by dysmetria and discontinuity. Whenever the child's movements relate to the maintenance of an attitude, especially in sitting or standing, there is instability, wavering from side to side, or astasia. The children show great disturbance of the *reactions* to equilibration, due to the fact that the defective cerebellum fails to effect and hasten the reestablishment of equilibrium, much the same way as it fails to make isolated movements precise and regular. Again, the defective cerebellum fails to apportion the measure and the continuity of movement. There is instability and imperfect reactions to equilibration by a special tonic action. This latter function is co-governed by the cerebrum and *to some degree* by peripheral stimulation. The defect in cerebellar function shown in hypotonia is not *compensated* for by a diseased cerebrum. The *latter organ* being unable to substitute or take up the cerebellar function there results a persistent dominance of hypotonus throughout the life-picture of this type, the suppression of the cerebellar functions in the condition or disease under study does not produce a palsy *per se* as ordinarily understood. Motility of the limb remains. It is never abolished entirely, as some movements or attempts at equilibration probably remain because some degree of substitutional power of the cerebrum is still possible; the greater part of its loss, however, is largely in evidence in this unique disease.

2. Papulonecrotic Tuberculides in Infants.—In nine cases of infantile tuberculosis, the diagnosis was first made by Wronker by the finding of papulonecrotic tuberculides. These skin lesions are absolutely characteristic, and when once seen are not easily confused with other conditions. They are of extreme diagnostic importance, especially in infancy when the clinical diagnosis of tuberculosis is notoriously uncertain. The majority of cases in infants are indicative of general miliary tuberculosis. The prognosis is generally bad, but not always fatal. The von Pirquet reaction is a great aid in clinching the diagnosis. A negative reaction, however, must not be allowed to mislead one in the presence of papulonecrotic tuberculides.

Canadian Medical Association Journal, Toronto

June, III, No. 6, pp. 451-546

5 *Puncture of Corpus Callosum. E. Archibald, Montreal.
6 Recent Work on Accessory Factors in Nutrition. H. S. Raper, Toronto.
7 Tuberculosis of Genito-Urinary System from General Practitioner's Standpoint. W. Hutchinson, Montreal.

5. Puncture of Corpus Callosum.—Archibald believes in obstructive hydrocephalus of high grade in the infant; (two cases) callosal puncture proved temporarily of slight benefit, but ultimately failed to relieve the condition.

Journal-Lancet, Minneapolis

June 1, XXXIII, No. 11, pp. 301-326

8 Etiologic Relationship between Ulcer and Cancer of Stomach. G. D. Head, Minneapolis.
9 Limitations and Possibilities of Roentgenoscopy. G. Earl, St. Paul.
10 Refinements of Diagnosis Possible in General Practice. J. P. Schneider, Green Isle, Minn.
11 Case of Intestinal Obstruction by Gall-Stone. G. Schwyzer, Minneapolis.
12 Surgery in Country Hospitals. L. Sogge, Windom, Minn.

Journal of Experimental Medicine, New York

June, XVII, No. 6, pp. 593-688

13 *Hematogenous and Obstructive Icterus. G. H. Whipple and C. W. Hooper, Baltimore.
14 *Icterus. G. H. Whipple and C. W. Hooper, Baltimore.
15 Morphologic Studies in Experimental Cretinism. A. L. Tatum.
16 Behavior of Saprophytic Cocci with Regard to Gram's Stain. I. J. Kligler, New York.
17 *Studies on Experimental Pneumonia in Rabbits. M. C. Winternitz and A. D. Hirschfelder, Baltimore.
18 Idem. A. D. Hirschfelder and M. C. Winternitz, Baltimore.
19 Components of Sphingomyelin. P. A. Levene, New York.

13. Hematogenous and Obstructive Icterus.—The results of the authors' experiments showed that normal and Eck fistula dogs react in a similar manner to the intravenous injection of hemoglobin obtained from laked red cells of the same animal. Hemoglobin appears in the urine after a few minutes and bile pigments in one to one and one-half hours. In this simple type of hematogenous jaundice the reaction is in no way influenced by shutting out the portal blood from the liver and cutting down its blood-supply to about 25 per cent. of normal. In a second type of hematogenous jaundice produced by chloroform anesthesia, which produces central liver necrosis, there is no essential difference between the normal and Eck fistula dog. The Eck fistula dog, as a rule, is more resistant to this poison, but, given a definite liver necrosis, the jaundice developing will reach its maximum on the second day as in the normal animal. This jaundice must be explained in part by capillary biliary obstruction, but in part by a hemolysin formed in the injured liver cells (Joannovics and Pick).

Simple obstruction of the common duct when combined with an Eck fistula gives rise to a definite low grade icterus with bile pigment constantly present in the urine. Under these conditions after doubly ligating and cutting the common duct with separation of the cut ends, the lumen of the duct may be established and bile may enter the intestine by means of a fistulous tract between the cut ends of the bile duct. The formation of bile and bile pigments is much less in an Eck fistula dog than in a normal animal and consequently the icterus is much less intense. This is probably due to a lessened activity of the liver cells because of decreased blood-supply. This observation does not harmonize with the current view that bile pigments are formed solely from hemoglobin, as there is no evidence of more hemolysis in a normal than in an Eck fistula dog. This suggests to the authors that the bile pigment may be formed in part, at least, from other substances than hemoglobin, and further, that bile pigment formation normally may *depend* in part on the functional activity of the liver cell rather than on the amount of hemoglobin supplied to it.

14. **Icterus.**—The object of this paper is to submit evidence that hemoglobin can be transformed into bile pigment in the circulation when the liver has been excluded from participation in the reaction. The authors summarize their work as follows:

> The intravenous injection of red cells obtained from the same animal and laked by distilled water is similar to certain types of hemolysis which result in hematogenous jaundice. This procedure cannot be criticized on the grounds of introducing toxic substances. The hemoglobin circulating in the blood-stream is rapidly changed, in part at least, to bile pigment. The change goes on with practically the same rapidity in a normal circulation, in an Eck fistula animal, and in a dog with Eck fistula and hepatic artery ligation. Moreover, the bile pigment formation goes on in a dog whose liver, spleen and intestines have been shut out of the circulation, and in those with a head and thorax circulation. In the last experiments there had been no operative manipulation of the liver and the bile pigment could not have escaped from the liver and have been absorbed by the circulation above the diaphragm; for example, by the thoracic duct. It is possible that the endothelium of the blood-vessels is the agent which brings about the rapid change of hemoglobin free in the plasma.

The authors conclude that in dogs, at least, hemoglobin can be rapidly changed into bile pigment in the circulating blood without participation of the liver.

17. **Experimental Cretinism.**—Several members of litters of very young rabbits, from two to three weeks old, weighing from 150 to 250 gm. each, were thyroidectomized by Tatum, while at least two members of each litter were kept for controls. In summarizing his findings Tatum says that degenerative changes were noted in practically every parenchymatous organ. Among these the most striking has been that of serous inhibition by the most active cells of these organs. In regard to the changes in the glands of internal secretion, the findings corroborate the statements of Cushing in regard to hypophysectomy, that removal of one gland of internal secretion results in changes in all the other glands. In this case, degenerative changes predominate in the hypophysis, thymus, ovary and testis, while hyperplasia is seen in the islands of Langerhans and the medullas of the adrenal glands. Finally, in the rabbit athyroidism is responsible for grave degenerative changes in practically all organs and tissues of the body, and many of the symptoms of cretinism have an anatomic basis in organic cellular changes.

Journal of Outdoor Life, New York

June, X, No. 6, pp. 160-188

20 Moderation. N. B. Burns, North Reading, Mass.
21 Care of Far Advanced Consumptive. E. A. Gray, Chicago.

Mississippi Medical Monthly, Vicksburg

June, XVIII, No. 2, pp. 25-43

22 Plea for Feebleminded Children. J. H. Fox, Asylum.
23 Accident Neurosis; with Report of Case. G. S. Bryan, Amory.
24 Cesarean Section. H. R. Shands, Jackson.

New York State Journal of Medicine, New York

May, XIII, No. 5, pp. 235-296

25 *Certain Elementary Concepts in Education Applied to Medicine. J. G. Adami, Montreal.
26 *Prevention and Cure of Cancer. P. Syms, New York.
27 Relation of Special to General Medicine. S. Voorhees, Elmira.
28 Duty of Physician in Education. H. A. Eastman, Jamestown.
29 *Prognosis in Infantile Paralysis. W. R. Townsend, New York.
30 Abnormal Temperatures. M. Cavana, Sylvan Beach.

25. **Elementary Concepts in Education.**—Adami advocates the appointment of a federal medical council, subsidized by the government at Washington, and formed of representatives from all the states, a council which should appoint well-known leaders of the profession to act as committees or assessors, to visit, report on and make recommendations regarding the efficiency and deficiencies of the individual medical schools of this continent, the expenses of such inquisitions to be met by the schools visited. Let each state continue to control and direct its own educational methods. Let the Federal assessors test the results, making sure that they reach the desired standard of quality. If this be asking too much at the present moment, at least the state might take action, might appoint committees of inquisition to inquire and report on the quality of the instruction afforded and the examinations of the schools within its boundaries, and might accept the graduates of those schools without the present farce of an examination which does not educe the capacity of the examinee.

26. **Prevention and Cure of Cancer.**—If it is true that 50 per cent. of cancers show a definite and easily recognized precancerous stage, and if it is true that there are 80,000 deaths from cancer in the United States annually, then, Syms says, the remedy of the precancerous state, and the prevention of cancer will save 40,000 of our citizens annually from this terrible scourge.

29. Abstracted *in* THE JOURNAL May 17, p. 1575.

Michigan State Medical Society Journal, Grand Rapids

June, XII, No. 6, pp. 307-354

31 Floating Cartilage in Knee-Joint. C. D. Brooks, Detroit.
32 Cataract Operation. J. G. Huizinga, Grand Rapids.
33 Legal Aspects Pertaining to Medical Profession. H. V. Barbour, Detroit.
34 Report on One of Dr. Friedmann's New York Clinics. N. M. Kassabian, Coopersville.
35 Tetanus. A. F. Kingsley, Battle Creek.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

May 31, I, No. 2735, pp. 1145-1192

1 Trend of Thought in Recent Pharmacologic Research. W. Whitla.
2 **Further Experience of Cardiac Sign in Cancer.* W. Gordon.
3 Lipodystrophia Progressiva. F. P. Weber.
4 Chronic Pneumococcal Infection of Lungs in Children. P. L. Sutherland and A. A. Jubb.
5 Treatment of Adenoids and Enlarged Tonsils without Operation. W. Steuart.
6 Cause of Enlarged Tonsils and Adenoids in Children and Their Treatment with Lymph-Node Extract. H. T. Ashby.
7 Iodin as Antiseptic in Tropical Countries. J. C. Ridgway.
8 Bionomics of Rat-Flea. C. Strickland.

2. **Cardiac Sign in Cancer.**—The cardiac sign in cancer first described by Gordon nine years ago consists of a remarkable diminution of the cardiac dulness in the recumbent posture as determined by digital percussion. In that posture the dulness, in the normal adult, begins above about the third costal cartilage, reaches rightward as nearly as possible to the midsternal line, and measures across about 3 to 3½ inches at the level of the fifth costal cartilage. On the other hand, in the cancer patient who presents the sign the cardiac dulness in recumbency begins above about the fourth or fifth costal cartilage, has its right margin ½ inch or 1 inch to the left of the mid-sternal line, and measures across less than 2 inches at the level of the fifth costal cartilage. Often it measures less than 1 inch across. Sometimes there is no cardiac dulness at all.

Gordon explains the sign in three different ways: 1. In some cases of cancer the heart is small, and this reduction in size has been said to account for the reduction of the dulness. It may sometimes partly explain it; but by *no* means always; for often the dulness, though very small in the recumbent position, is normally or even abnormally broad in the erect. 2. If the loss of elasticity, so common in the skin in cases of cancer, affects the lung as well, it is conceivable that ordinary respiration may induce a sort of spurious emphysema and thus diminish the dulness. It is now known that a peculiar form of emphysema does often occur in cancer —Fenwick found it in 28 per cent. of his cases of gastric cancer—and no doubt in many cases this helps to produce the sign. 3. The cardiac sign is often associated with a remarkably soft and toneless pulse, and with very feeble heart sounds. If we suppose that the first is due to a deficiency of blood—such as the anemia so often present suggests—and that the second shows a flabbiness of the heart muscle comparable to the flabbiness of the skeletal muscles so often recognizable in such patients, it is not difficult to imagine what a flabby and imperfectly filled heart, more than a normal heart, would do. And this is just what actually seems to occur. For the disparity between the heart dulness in the erect and recumbent positions in cancer is usually much greater than that observed either in health or in other diseases. Gordon has found, for instance, a heart dulness in a case of cancer measuring 5 inches across in the erect position, drop to 1½ inches across when the recumbent posture was assumed. Where the heart is considerably displaced upward by abdominal distention, Gordon has found the sign unreliable. Here clearly the organ is pushed from a wider into a narrower space, where it cannot so easily drop away on recumbency from the anterior chest wall. Again, where a large esophageal cancer has lain just behind the heart the sign has been absent, and Gordon thought that this might be explained by the growth pinning the organ forward against the sternum and rib cartilages.

In 1908, from a study of 103 cases, into all of which a suspicion of cancer had entered, Gordon obtained the following figures: Of thirty-eight cases in which a presumable cancer was naturally accessible to direct observation or was examined at operation or post-mortem, 89 per cent. showed it. Of forty-six cases, on the other hand, which could not be supposed to have been cancerous, it was only found present in 24 per cent. His further experience bears out this contrast. During the last four years he has collected 107 cases, either cancerous, simulating cancer, or accompanied by loss of flesh. They indicate that whereas in cancer the sign is present in an overwhelming majority, in non-cancerous cases it is even rarer than his former figures suggested. Thus, of thirty-six cases which appear undoubtedly to have been cancerous, 83 per cent. showed the sign, whereas of seventy-one cases which cannot be supposed to have been cancerous, only 8 per cent. showed it. Putting together this series and that of 1908, we obtain ninety-three cancerous cases showing the sign in nearly 87 per cent., and 117 non-cancerous cases showing it in only 14 per cent.; or, considering the results in another way, of ninety-eight cases showing the cardiac sign, 82 per cent. were cancerous, and of 112 cases not showing this sign 88 per cent. were non-cancerous.

Lancet, London

May 31, I, No. 4683, pp. 1507-1574

9 Trend of Thought in Recent Pharmacologic Research. W. Whitla.
10 Electric Action of Human Heart. A. D. Waller.
11 *Primary Epithelioma of Nipple in Girl Aged Eleven. W. H. Battle and B. C. Maybury.
12 Analysis of Nystagmus. A. Abrahams.
13 *Case of "Idiopathic" Cerebral Abscess. J. Henderson.
14 *Bacillus of Unusual Kind (Proteus Group) Isolated from Case of Septicemia. J. A. B. Hicks.
15 Case of Colocynth Poisoning. R. B. Roe.

11. **Epithelioma of Nipple.**—A girl aged 11, was admitted to the hospital June 8, 1910, with a ten weeks' history of attacks of pain in the left nipple. Shortly after the commencement of the pain the nipple was found to be somewhat larger than that on the other side. Treatment consisting of hot fomentations was carried out in the out-patient department four weeks previous to admission; on one occasion the nipple was incised but no pus was found. On admission the left nipple was found to be enlarged about the size of a small hazel-nut. Superficially the tumor consisted of a layer of horny material, covering the deeper portion which was of softer consistency. There was no infiltration of the subcutaneous tissues, and the tumor was not adherent to the deeper structures. Pain of a stabbing character was produced on palpating the tumor. No enlarged lymph-nodes were felt in the axilla.

The first operation was performed June 17. The tumor together with the subcutaneous tissues down to the pectoralis major, was removed by two elliptic incisions made above and below the nipple and half an inch away from it. Bleeding points were ligatured with catgut, and the wound was closed with salmon-gut. The report from the clinical laboratory was "squamous-celled carcinoma."

The patient was readmitted six weeks later with a soft, painless, polypoid excrescence of about the size of the original nipple growing in the scar. One lymph-node was felt enlarged in the axilla under cover of the pectoralis major. July 22, the second operation was performed. Two elliptic incisions were made giving the scar a wide berth, and the granulation growth, axillary glands and sternal portion of the pectoralis major were removed. The report of the clinical laboratory was: "The scar shows chronic inflammation with giant cells around ligatures. Nodes normal." There is at present no evidence of recurrence.

13. **"Idiopathic" Cerebral Abscess.**—Henderson's patient, a schoolboy aged 13, awoke one morning complaining of severe headache. A few minutes later he had a convulsive seizure, the face becoming cyanosed and the limbs being violently jerked about. This convulsion lasted about thirty minutes, and was followed at intervals during that day by seven others of a similar nature. Next morning there was a further convulsion. On the next day he seemed to be perfectly well, and an examination of the cerebrospinal fluid, obtained by lumbar puncture, was quite negative. He remained well for a month, when he had an attack of sickness and vomiting, but thereafter he presented no symptoms of illness, and was dismissed well four weeks later. There was during his residence no return of the convulsions and no complaint of headache. After the patient's return home he was perfectly well for a few weeks, but then the headache began to reassert itself. It recurred at intervals of about a week, with varying severity, until the beginning of October, when the pain became almost constant and always frontal in distribution. It was usually felt on rising in the morning, then diminishing after an hour or two, only to return with increasesd severity later. Often it was much less severe, or almost absent in the evening. Along with the constant headache he exhibited great restlessness and sleeplessness.

After October 3 (six months after onset of the original trouble) he again became sick and vomited, and until admission to hospital the sickness was rarely absent. Fits of vomiting, without definite food relation, occurred three or four times daily, the vomitus being described by the boy's mother as "just like bile." Four days before admission he had a convulsive seizure, the limbs being very rigid and the eyes rolling about. This only lasted a few minutes, and was not repeated. There was no history of injury to the head at any time, ear trouble, or other septic process. Family history negative. The boy died nineteen days later.

On opening the head the dura mater appeared to be tightly stretched, and the surface of the brain was dry, anemic and flattened. In the left lower parietal region there was a large thin-walled cyst, causing a considerable external bulging. This proved to be a large abscess about 3 inches in diameter. The convolutions affected were most probably the gyrus supramarginalis in its whole extent, and the posterior central, angular and superior temporal toward the margin of the abscess. This abscess extended inward about the level of the corpus callosum, and had burst into the ventricles. Pus was also escaping around the crura cerebri, and there was at the base an early acute meningitis, extending right down the spinal cord. There was no spreading above the tentorium cerebelli or along the Sylvian fissures. The middle ears were examined and proved to be quite healthy. Nothing noteworthy was found elsewhere, all the internal organs, both of chest and abdomen, being quite healthy. This case is placed on record for several reasons. The symptoms and course of the disease were not at all typical or characteristic, and the absence of any assignable cause during life, with the failure to discover a cause on post-mortem examination, rendered a correct diagnosis extremely difficult, if not quite impossible. In such cases, with no evidence of the origin of infection, Henderson says, a diagnosis of abscess must always be absolutely uncertain.

14. **Unusual Bacillus in Septicemia.**—The bacillus described by Hicks, he states, belongs to that group of bacteria known as the "proteus group," its growth in media with production

of a foul odor, its liquefaction of gelatin and milk clot being the features relegating it to this group. It is pathogenic to the guinea-pig and in the case recorded to a human being. It is this latter fact that has led Hicks to consider this case worthy of record, for here is an organism which belongs to the group of saprophytic organisms causing a true septicemia such as is usually associated with the parasitic bacteria. Lastly, it is probably a new species, its nearest ally being a member of the group described by Houser.

Presse Médicale, Paris

May 15, XXI, No. 40, pp. 397-404

16 Tuberculous Peritonitis without Effusion. (La forme anascitique de la péritonite tuberculeuse.) P. F. Armand-Delille.
17 *Spinalis Muscle Sign of Pleurisy. (Le signe des spinaux.) F. Ramond.

May 17, No. 41, pp. 405-416

18 Disturbance from Dilatation of Cecum and Inflammation around Ascending Colon. P. Alglave.

May 21, No. 42, pp. 417-424

19 *Differentiation of Pleuritic Effusion. (L'hydrothorax bacillifère.) M. Villaret and P. Descomps.
20 Amino-Acids as Culture Medium for Bacteria. R. Dalimier and E. Lancereaux.
21 Sodium Salts in Treatment of Melancholia. (Des injections associées, d'iodure de sodium et de cacodylate de soude en particulier dans les états mélancoliques.) J. Champion.

17. **The Spinalis Muscle Sign.**—Ramond regards this sign of pleurisy as analogous to the rigidity of the abdominal walls in case of trouble below. There is a reflex contraction of the spinalis muscle tending to immobilize the diseased thorax and pleura. As the patient stands perfectly straight, in case of pleurisy, the contracted spinalis muscle forms a prominent mass, hard and larger than the normal outline of the muscle. This occurs, of course, in other conditions, but these can be easily excluded when examining for pleurisy. The spinalis muscles are liable to be unusually developed in porters or in case of much lordosis and the sign may accompany kidney and liver disease, peritonitis, etc. These conditions, however, can generally be excluded when it is a question of pleurisy. The spinalis sign is extremely useful for revealing pleurisy in its incipient stage; it may persist for weeks or months after recovery.

19. **Tuberculous Hydrothorax.**—Villaret and Descomps call attention to the diagnostic importance of various simple chemical reactions which may be obtained in the effusion found with pleurisy even when it may seem to be an ordinary hydrothorax. Microscopic examination apparently confirms its merely mechanical origin as it shows the manifest predominance of endothelial cells, but inoculation of guinea-pigs may reveal a tuberculous origin. They report a case of this kind in which a man of 35 had a pleural effusion but there was no lymphocytosis in the effusion and the other features suggested ordinary hydrothorax. The Rivalta and Gangi tests and the collargol-precipitating reaction showed on three occasions that the infusion was of inflammatory nature and thus enabled a correct diagnosis long before inoculation of animals gave positive results. The Rivalta reaction is the formation of a little cloud like a puff of cigarette smoke when some of the effusion is added to 50 c.c. of distilled water containing 1 drop of acetic acid. The fluid remains limpid in case of a transudation. The Gangi reaction is the double disk which forms when some of the effusion is poured on hydrochloric acid. A white ring forms at the zone of contact with a transudate, but with an inflammatory effusion there is a second disk above, and sometimes a violet stain.

Semaine Médicale, Paris

May 28, XXXIII, No. 22, pp. 253-264

22 Causes of Intermittency in Stuttering. (De l'intermittence dans le bégaiement.) Chervin.

Berliner klinische Wochenschrift

May 19, L, No. 20, pp. 906-952

23 Inflammatory Tumors on Omentum. (Ueber circumscripte entzündliche Tumorbildung in der Bauchhöhle, ausgehend vom Netz.) V. Schmieden.
24 *Posterior Rhinitis in Infants. (Die Rhinitis posterior im Säuglingsalter.) F. Göppert.
25 Recurrent Paralysis with Mitral Stenosis; Four Cases. Mediastinitis Probably Responsible. (Zur Frage des Zustandekommens linksseitiger Recurrenslähmung bei Mitralstenose.) H. Dorendorf.
26 Chemistry of the Cell. III. (Die sauren Kerne.) P. G. Unna and E. Wolf.
27 *Action of Epinephrin on Coronary Circulation. (Zur Frage der Adrenalinwirkung auf den Coronarkreislauf.) F. Meyer.
28 The Question of Reinfection with Syphilis. H. Löhe.
29 *Access to Lacrymal Sac Through Nose. (100 Fällen von Dakryostenose.) J. M. West.

24. **Seriousness of Rhinitis in Infants.**—Göppert emphasizes the clinical importance of coryza in infants as is becoming recognized more and more. We know now that the infant's "cold" is often the main cause for so-called parenteral diarrhea and that dyspeptic disturbances are frequently the result of the toxic influences from coryza infection. He relates a recent experience in which all the ten infants in his service contracted coryza within two weeks; only a few developed bronchial catarrh but nearly all had more or less diarrhea and lost rapidly in weight, some to a considerable extent. The coryza often locates in the back of the nose and it may obstruct the passages permanently, the children suffering from impeded breathing as with adenoids, retarding their development for months or even years, and liable to entail secondarily serous meningitis and pressure on the brain. He gives an illustration of one infant to show the typical aspect with this obstructive posterior rhinitis. The nostrils are wide, the nose apparently clear and sound, the expression a little anxious, the upper part of the face inclined to puffiness, and the chest short and narrow, the abdomen abnormally long in proportion. There is generally more or less meteorism, probably exaggerated by the child's swallowing air. There is also a tendency to frequent recurrence and exacerbation of the rhinitis. As the child grows and the skull becomes larger, the passages become permeable.

27. **Action of Epinephrin on the Coronary Vessels.**—Meyer's ingenious experimental work on dogs and cats has confirmed the assumption that epinephrin dilates the coronary vessels and accelerates and increases the circulation through them.

29. **Operations for Suppuration in Lacrymal Sac.**—West thinks the proper way to treat this is by cutting off a little chip from the nasal process of the superior maxillary bone and from the lacrymal bone, working through the nose, until the lacrymal sac at the side wall of the nose is exposed. Then the side of the sac toward the nose is cut away. By this means ample communication is provided by the natural routes between the eye and the nose, above the inferior turbinate bone which is left intact. He has performed this conservative operation for dacryostenosis in over a hundred cases and in 90 per cent. of the cases the suppuration promptly healed, the normal course for the tears was restored, and this with nothing to induce disfigurement.

Deutsche medizinische Wochenschrift, Berlin

May 15, XXXIX, No. 20, pp. 921-976

30 The Pathology and Treatment of Degenerates. A. H. Hübner.
31 Serodiagnosis of Cancer. (Zur Frage der serologischen Karzinomdiagnostik. II. Die Meiostagminreaktion.) M. Rosenberg.
32 *Vaccination against Diphtheria. (Zur Prophylaxe und Therapie der Diphtheria.) E. Schreiber.
33 *Serotherapy of Pregnancy Dermatitis. (Zur Schwangerschaftsserumtherapie der Schwangerschaftstoxikosen.) W. Rübsamen.
34 Technic for Removal of Cancer of Upper Jaw. (Die erweiterte Operation der malignen Oberkiefertumoren.) F. Kuhn.
35 *Operations on Nose in Treatment of Headache. (Nasenoperationen zur Beseitigung von Kopfschmerzen.) Fröse.
36 *General Asthenia and Diabetes. (Asthenische Konstitutionskrankheit und Diabetes mellitus.) G. Graul.
37 Treatment of Sexual Impotency. (Die physikalische Therapie der sexuellen Impotenz.) E. Tobias.
38 Incarcerated Appendix-Hernia. (Beitrag zur Aetiologie der Appendicitis.) A. Sasse.

32. **Vaccination against Diphtheria.**—Schreiber's experiences were some of those on which Behring based his announcement in regard to the efficacy of his method of immunizing against diphtheria. (See Berlin Letter, p. 1896.) Schreiber says that the conflicting experiences in regard to the immunity con-

ferred by one attack of diphtheria are explained by the large amounts of antitoxins found in the blood of some persons while others have little or none. It will be interesting to determine in future research the connection between large proportions of antitoxins in the blood after diphtheria and the freedom of such persons from new attacks of the disease later. Behring's method of vaccination does not induce active immunization until twenty-one days after the first injection. It is possible, Schreiber remarks, that it might be advisable to inject antitoxin while the vaccination is under way. Matthes' experience in one clinical case seems to indicate that the combination of the two methods did not detract from the specific action of either. Schreiber reports parenthetically the case of a robust woman of 23 who had a severe typical attack of anaphylactic phenomena on injection of diphtheria antitoxin fourteen years after she had been treated with antitoxin during an attack of diphtheria. He knows of no case on record in which such severe and protracted disturbances were oberved after such a long interval.

33. **Serotherapy of Pregnancy Dermatitis.**—Rübsamen once reported a case in which serotherapy had no effect on a pregnancy hemorrhagic dermatitis, but in two more recent cases the effect was surprisingly beneficial. The serum injected was from healthy parturients and the cure was prompt and permanent.

35. **Operations on the Nose to Cure Headache.**—Fröse reviews his experiences in ten cases to show the remarkable benefit that may follow operations on the nose when conditions induce congestion or pressure, entailing neuralgia or headache. In one man a projecting ledge on the septum had induced a reflex heart neurosis, with palpitations and dropped beats—cured by excision of the protuberance. Koblanck reported nine similar cases—all in medical men—four years ago, and has encountered a similar case since, all responding with a complete cure to operative measures restoring normal permeability to the nose. Only one of Fröse's ten patients had a little nausea and fever after these operations on the nose for headache, and this one patient had refused to obey the directions to keep the head up. He gives minute instructions for the technic for such operations: cocain spray has proved useful in some cases. He insists that submucous resection of the septum far up and back is not the dangerous operation some think. It is possible in this way, without sacrificing important parts of the nose, to remedy conditions which have induced for years headache and neuralgia, especially pain from pressure on the branches of the anterior ethmoidal nerve from the abnormal shape of the septum. The fear of operative meningitis has deterred many from attempting this useful little operation, and Fröse's communication aims to dispel this fear.

36. **Constitutional Asthenia and Diabetes.** — Graul has encountered cases of Stiller's universal asthenia in which there seemed to be insufficient functioning of the autonomic nervous system, while in others this autonomic system seemed to be in a state of exaggerated functioning. The latter condition seems to have a favorable influence on existing diabetes of purely nervous origin.

Medizinische Klinik, Berlin

May 11, IX, No. 19, pp. 735-776

39 Delivery with Narrow Pelvis. (Geburt bei engem Becken.) A. Dührssen.
40 The Criminal Insane. (Geisteskranke Verbrecher.) Ziemke.
41 Influence of Diathermia on the Temperature. (Einfluss der Diathermie auf die Körper- und Gewebetemperatur des Menschen.) A. Fürstenberg.
42 Spontaneous Pneumothorax after Induced Pneumothorax. J. Hornung.
43 Necessity for Special Institutions for Treatment and Care of Bone and Joint Tuberculosis. (Behandlung der chirurgischen Tuberkulose in Spezialheilanstalten.) O. Vulpius.
44 Overestimation of Radio-Activity as the Potent Element in Mineral Waters. E. H. Kisch.
45 Action on the Blood Supply of the Brain by Heat Stimuli Applied to the Skin. J. Strasburger.
46 Hot Foot Bath in Differentiation and Treatment of Sprains. (Das heisse Bad bei Verstauchungen.) Kantorowicz.

Münchener medizinische Wochenschrift

May 13, LX, No. 19, pp. 1017-1072

47 *Comparison of Temperature in Rectum and Axilla. (Vergleichende Temperaturmessungen.) C. Stäubli. Concluded in No. 20.
48 Gall-Stone Obstruction of Common Bile Duct. (Indikationsstellung beim akuten Steinverschluss des Ductus choledochus nebst statistischen und technischen Bemerkungen.) L. Heidenhain.
49 *Intravenous Drop Infusion. (Ueber intravenöse Dauerinfusion.) M. Friedmann.
50 Improved Technic for Cultivation of Diphtheria Bacilli. (Verwendbarkeit der Conradi-Trochschen Tellurplatte zum Diphtherienachweis.) Klunker.
51 Volitional Contraction of the Tensor Tympani; Two Cases. E. Mangold.
52 *Epidemic Poliomyelitis. (Erkrankung von Geschwistern an Heine-Medinscher Krankheit.) Trumpp.
53 Physiology and Pathology of the Digestive Tract. (Experimentellradiologische Studien zur Physiologie und Pathologie des Verdauungstraktes.) R. Lenk and F. Eisler.
54 Efficacy of Chondrotomy for Emphysema. (Zur Freundschen Emphysemoperation.) F. Jessen.
55 Diagnosis of Spinal Cord Tumors. (Rückenmarkstumoren.) Jancke.
56 Operative Removal of Undiagnosed Foreign Bodies in Neck or Abdomen. (Eigentümliches Verhalten von Fremdkörpern.) C. Sultan.
57 *Mosquito Net as Protector against Malaria in 1888. (Zur Geschichte der Malariaübertragung.) E. Schrwald.

47. **Comparative Temperature Measurements.**—Stäubli has already called attention to the increase in the rectal temperature after walking, even in the healthy, while the temperature in the axilla may drop. He gives some charts to show the behavior of the temperature in mouth, axilla, rectum and groin; the two latter run a parallel course, rising after exercise and subsiding to normal in twenty or thirty minutes. He warns that no reliance can be placed therefore on the temperature in the rectum unless the patient has been perfectly quiet for from thirty to sixty minutes before it is taken.

49. **Intravenous Drop Infusion.**—Friedmann has applied the technic for proteclysis for intravenous infusion of salt solution and has been much pleased with the harmlessness and efficacy of the method in his experience with twenty cases. He added a little heart tonic or epinephrin as happened to be needed, and kept up the infusion five hours or longer, once for twenty-three hours, the cannula introduced into the median cephalic or ulnar vein. The forearm is raised perpendicularly by a bandage suspended from a frame above. The blood-pressure does not rise so rapidly under the infusion as with the ordinary technic, but it slowly increases and keeps steadily at an even, approximately normal level. There were no by-effects and the heart seemed to bear without injury infusion of large amounts in this way, up to three or five liters or even more. Of course the blood-pressure must be kept under constant control, and if it goes above normal or the patient becomes restless and uncomfortable the fluid must be shut off. The abdomen must also be kept under supervision to watch if there is transudation; superfluous fluid seems to be thrown off in this way if the kidneys and sweat glands are not working sufficiently. He experimented further with medicating the fluid, and thinks that his results were encouraging for administering drugs in this way.

52. **Epidemic Poliomyelitis.**—Trumpp states that this disease appeared at Munich in the last of 1912 almost in epidemic form; thirty cases were reported by the pediatrists alone, mostly isolated cases. In one family with ten children three of the children developed unusual types and the disease seemed to recur after an interval. In one child the mild clinical picture was intentionally exaggerated at the recurrence after five weeks; the case suggests the necessity for being on one's guard against imitation and simulation.

57. **Mosquito Net as Protector against Malaria in 1888.**—Schrwald cites from Stanley's "Darkest Africa" a passage in which Stanley mentions that Emin Pasha had told him that since he had made a practice of sleeping under a mosquito net he had been free from malaria. Stanley mentions it merely as an absurd idea. He made no effort to act on the sug-

gestion and continued to suffer from malaria afterward as before, while Emin Pasha carried his own mosquito net around with him and was apparently immune to the disease. Emin was a physician but the true connection between the net and the disease did not occur to him.

Wiener klinische Wochenschrift, Vienna

May 8, XXVI, No. 19, pp. 737-780

58 *Treatment of Stab Wounds of the Lungs. (Zur Frage: Operative oder konservative Behandlung von Stichverletzungen der Lunge.) E. v. Kutscha.
59 Mechanism of General Anesthesia with Magnesium Sulphate. (Zur Kenntnis der Magnesiumnarkose.) J. Schütz.
60 The Changes in the Hypophysis with Acromegaly. H. Poindecker.
61 *Cancer of the Lung. (Ueber den sogenannten Schneeberger Lungenkrebs.) A. Arnstein.
62 From the Seat of War. (Kriegschirurgische Erfahrungen aus Serbien.) J. v. Budisavljevic.
63 Action of Therapeutic Exercises on the Circulation. II. (Die Wirkung der Heilgymnastik auf die Blutzirkulation im Lichte der klinischen Erfahrungen.) S. Salaghi.
64 *Conservation of Energy in Medical Publications. (Der energetische Imperativ—Ostwald—und die medizinischen Zeitschriften.) J. Kollarits.

58. **Stab Wounds of the Lungs.**—Four cases are described to illustrate the various conditions that may be encountered compelling operative measures, and eight other cases in which the patients recovered without an operation. Kutscha compares his experiences with those of others on record and remarks that severe hemorrhage and collapse from pneumothorax justify operative measures even when no differential pressure procedures are applicable. If the thorax is opened it should be done extensively enough for ample access and suture of the wound in the lung before attempting pneumopexy or artificial insufflation of the lung.

61. **Schneeberg Miners' Lung Cancer.**—Arnstein calls attention anew to the remarkable prevalence of malignant disease of the lungs in the miners in the Schneeberg district in Saxony. The minerals mined are mostly cobalt, bismuth and nickel. In 1878 Härting and Hesse reported that a lymphosarcoma of the bronchial lymph-nodes or an endothelial sarcoma was responsible for 75 per cent. of all the deaths among the miners. Arnstein has been investigating the subject anew and found that one-third of all the miners admitted to the hospital 1907-1911 entered with the diagnosis of cancer of the lung, and it was given as the cause of death in 44 per cent. of the death certificates. It is probable that in many cases tuberculosis and possibly also pneumoconiosis may have been eroneously diagnosed as cancer of the lung as necropsies are rare. The local mining industry is declining, and Arnstein urges more extensive study of the subject while there is still material for it. In the two cases which he was able to examine post mortem, the trouble proved to be chronic pulmonary tuberculosis in one case, but in the other true carcinoma of the lung with metastasis.

64. **The Conservation of Energy in Medical Publications.**—Kollarits pleads for two reforms in scientific publications, medical and otherwise, which would mean a great saving in energy, time, expense and space. His first suggestion may seem trivial but he declares that if one studies it a little the great advantage of its general adoption will become apparent. This suggestion is that all books should be of a standard uniform size, differing in thickness only. Think of the waste of shelf-room in libraries, he exclaims, the difficulty of packing books, and the endless number of different machines and tools required to make the books of the varying sizes now in vogue. The price of books could be reduced if all were of a standard size. The international organization of the chemical associations has adopted a uniform standard size for all the journals on chemistry. The leading German medical weeklies are about 10 by 12 inches in size, and he says that the bound volume is so unpleasantly large that no one but an athlete can handle it conveniently.

His other plea bears on the duplication of abstracts in current medical literature. All of the six leading German weeklies are taken in the medical libraries and many physicians subscribe to more than one and also to the two French weeklies. This means that six or eight reviews of the same original article are thus received, in the various weeklies, duplicating, nay, sextupling the abstract, a useless expense to publishers and subscribers and a wearisome annoyance to readers, while filling to no purpose the library shelves. He thinks it is no exaggeration to say that a fourth of the shelf-space given up to these journals is wasted in this way. His suggestion for a remedy is radical, as he would like to have the leading journals unite to publish a separate supplement common to all and alike for all, devoted exclusively to abstracts of current medical literature. The subscriber would receive this supplement with the first of these journals to which he subscribed, and all the other weeklies could be obtained at a cheaper price as they would not have to supply this supplement. He remarks that the abstract-writers might be looked on as too autocratic, as the fate of the original articles would thus rest to such an extent in their hands alone, and it might be better not to disclose their identity. One great advantage of this plan would be that the abstracts could be made more numerous and more complete. It might be possible to publish the common supplement in several different languages, as physicians of different races have practically the same needs in keeping abreast of the medical sciences.

Zeitschrift für Kinderheilkunde, Berlin

VII, Nos. 3-4, pp. 161-320. Last indexed June 14, p. 1931

65 Calcium and Phosphorus Metabolism Studied in Two Boys of 13 and 14. O. Herbst.
66 *The Diet in Infections. (Welche Aufgaben stellen die Infektionen im Säuglingsalter der Diätetik?) L. Langstein.
67 Colostrum as Nutriment. (Der Nährwert des Colostrum.) L. Langstein, F. Rott and F. Edelstein.
68 Deviation of Complement in Whooping-Cough. (Der Komplementbindungsvorgang bei Keuchhusten.) M. Manicatide.
69 *Prophylaxis of Infection in Infants' Wards. (Zur Infektionsverhütung im Säuglingspital.) L. F. Meyer.
70 The Blood and the Heart Action in Healthy Children. (Arbeitsleistung des Blutes und des Herzens bei gesunden Kindern vom 6 bis 11 Lebensjahre.) E. Müller.
71 *Inanition in Infants and Glycosuria. (Inanition und Zuckerausscheidung im Säuglingsalter.) H. Rietschel.
72 Importance of Laws of Physics and Chemistry in Study of Infant Metabolism, etc. (Beispiel für die Bedeutung physikalischer und physikal-chemischer Forschungen in der Physiologie und Pathologie des Säuglings.) B. Salge.
73 Albuminuria in New-Born Infants. F. Heller.
74 Idiosyncrasy in Infants to Cow's Milk. H. Neuhaus and G. Schaub.

66. **Diet in the Infections of Infancy. Particularly in Tuberculosis.**—Langstein reiterates that next to mothers' milk protein milk, "albumin milk," offers the best food for infants, not only in acute infections, but in tuberculosis. The diet should be poor in carbohydrates and rich in fat and protein and albumin milk answers these requirements. An excess of carbohydrates leads to increased fermentation and production of acids, thereby causing demineralization, which is held by some authorities to be an important factor in the nutritional disturbances of tuberculosis.

69. **The Control of Infection in Infants' Wards.**—Meyer believes that in so far as the condition known as hospitalism exists to-day it is to be attributed to infection, chiefly of the respiratory system. From statistics of the Berlin infants' hospital, he found that a much greater percentage of the deaths were from respiratory diseases than from nutritional diseases, and that practically every child sojourning in the hospital four weeks or more had some sort of respiratory infection, the majority of them influenza. He believes that many cases of digestive disturbance are secondary to respiratory infections, and this conclusion is confirmed by the marked decrease in diarrhea and other intestinal complaints after steps were taken to hinder the spread of such infections. Believing that these infections are spread directly through the air, he adopted the plan of dividing the ward into separate compartments with a central corridor between. The compartments were separated at first by cloth screens in wooden frames, later by glass partitions. Visitors were not allowed to enter the compartments, but only the corridor. Pictures of the arrangement of the compartments are given and tables showing the very favorable results obtained. Before this separate box

system had been installed, each child admitted with a catarrhal infection had infected on an average two others, while afterward thirty-six children admitted with respiratory infections transmitted them to only two others. Diphtheria, however, could not be controlled in this way, showing that it is spread indirectly through others. As stated before, there was a marked gain in the general health of the children guarded from respiratory infection.

71. **Inanition and Excretion of Sugar in Infants.**—Rietschel calls attention to the fact that withdrawal of food, which is frequently used as a therapeutic measure, involves some danger for the child. He showed experimentally that after two or three days of fasting sugar could be demonstrated in the urine even of healthy infants, thus proving that damage had been done to the intestinal epithelium. This does not occur in adults. This injury may be more intense and lead to much more serious results in sick infants.

Zentralblatt für Chirurgie, Leipsic

May 17, XL, No. 20, pp. 761-808

75 Fascia Flap for Restoration of Diaphragm; Experimental Research. (Ueber den plastischen Ersatz von Zwerchfelldefekten durch die Fascia lata.) P. S. Ikonnikoff and A. W. Smiroff.
76 Reduction of Fractures under Local Anesthesia. B. Dollinger.
77 *Injury of Nerves from Blocking the Brachial Plexus. (Nervenschädigungen bei Plexusanästhesie.) M. Hirschler.

77. **Injury of the Nerves with Local Anesthesia of the Brachial Plexus.**—Hirschler reports three cases of direct injury of the nerves after blocking the brachial plexus; the patients were men of 16, 52 and 59. In the latter case the disturbances were paralysis of the flexors of the index finger and tendency thereto in the thumb and middle finger; electric tests showed the complete reaction of degeneration. By the end of four months the paralysis had subsided but the fingers were still weak. In the other cases the disturbances were merely sensory. When the injection is made into the brachial plexus there is always possibility of injuring the nerve fibers from the tip of the needle; when other nerves are blocked, the injection is merely around, not into the nerve proper, as in the case of this plexus. He does not think the by-effects are severe enough to prohibit the use of this technic as it may be possible to avoid them by using suitable needles. In case of patients requiring much use of the fingers, such as pianists, violinists and fine handcraftsmen, some other method of local anesthesia might be preferable.

Zentralblatt für Gynäkologie, Leipsic

May 17, XXXVII, No. 20, pp. 713-756

78 Technic for Cesarean Section. (Zur Technik des Kaiserschnittes.) J. Veit.
79 *Rupture of Uterus under Pituitrin. (Fall von Uterusruptur nach Pituitrin.) E. Herz.

79. **Rupture of the Uterus after Pituitrin.**—Herz reports a case in which a primipara of 20, delicate and anemic, had had weak ineffectual labor for two days when Herz injected 1 c.c. of pituitrin at 4:15 p. m. The labor pains increased at once in intensity and duration and after twenty minutes assumed a tetanic character, each lasting from five to seven minutes, and extremely severe. At 5:15 there was a tempestuous uterus contraction with evident rupture of the uterus, and at 7:15 p. m. the child was born in deep asphyxia but was revived after an hour's work. The cervix was found entirely torn off from the front wall of the uterus; the child and placenta had been expelled through the ragged gap. No attempt was made to suture the rupture, and sedatives were required to quiet the after-contraction, but the patient recovered. In the forty-seven cases in which he has used pituitrin his experience was always least favorable with frail, anemic women, some of them having vertigo and syncope, vertigo and vomiting or tinnitus persisting several days or tenesmus with much diuresis. The os at the time the pituitrin had been injected in the case of rupture, was permeable for only two fingers, and the lower segment of the uterus bulged outward; this may have afforded a predisposition to rupture. The disproportion between the size of the head and the flat rachitic pelvis was not sufficient to explain the rupture. The pituitrin had also evidently injured the fetus by the furious contractions induced, as the heart sounds were very faint. He adds that others have reported unfavorable action from hypophysis extract in various cases; post-partum atony of the uterus has been reported by Stern, Bagger and Jörgensen, and Spaeth has had two cases, while the latter, Malinowsky, Lieven and Nagy have reported weakening of the heart sounds and asphyxia of the child; Schneider-Sievers, Calman and Voigt have reported cases of collapse, tinnitus and dizziness; Nagy, Schneider-Sievers and Toepfer of eclampsia; contraction of the previously dilated os has been mentioned by Mackenrodt, Patek, Rieck, Hamm and Heil; Hamm, Voigts and Mackenrodt have reported tetanus of the uterus, and Voigts, premature separation of the placenta.

Zentralblatt für innere Medizin, Leipsic

May 24, XXXIV, No. 21, pp. 521-552

80 Technic for Roentgenoscopy of the Duodenum. O. David.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 18, XXXIV, No. 59, pp. 615-630

81 Clinical Significance of Indican and Urorosein in the Urine and of Tryptophan in the Stools. B. Vasoin.

May 20, No. 60, pp. 631-638

82 *Two Cases of Traumatic Leukemia. A. Facchin.

82. **Traumatic Leukemia.**—Facchin has found seven cases recorded of leukemia developing after an accident involving the spleen, including two in which it followed splenectomy; Murrich regarded amputation of the thigh as responsible for the leukemia in his case. In Facchin's two cases the spleen was directly injured in a fall or in an accident bending the body far over backward. The extreme pallor and weakness and the leukemic blood-findings continued a progressive course until each of the young men died of intercurrent pneumonia in about two months after his accident.

Policlinico, Rome

May 18, XX, No. 20, pp. 697-732

83 *Etiology of Progressive Paralysis. V. Massarotti.

83. **Etiology of Progressive Paralysis.**—Massarotti states that in all of his thirty-five patients with this affection, the connection with syphilis was unmistakable and there was always a history of no or inadequate treatment.

Brazil-Medico, Rio de Janeiro

April 22, XXVII, No. 16, pp. 151-160

84 The "Coccus-Like Bodies" or "Marginal Points" in the Blood are Merely Shreds of Broken Down Red Corpuscles. (Pesquizas sobre a natureza dos anaplasmas.) E. C. Dias and H. de B. Aragão.

May 1, No. 17, pp. 161-170

85 Modern Treatment of Painful Flat-Foot. (Tratamento do pe chato doloroso.) C. Werneck.

Ugeskrift for Læger, Copenhagen

May 15, LXXV, No. 20, pp. 809-868

86 *Sterilization of Olive Oil, Glycerin and Liquid Paraffin. (Metode til sterilisation af nogle ikke vandige Stoffer med højt Kogepunkt.) K. Schroeder.

86. **Sterilization of Olive Oil, Glycerin and Liquid Paraffin.**—Schroeder tested these substances as supposedly sterilized by the technics commonly in vogue and found that the sterilization was far from being dependable. He then instituted research of his own in this line and announces that heating in a dry oven for one hour at a temperature of 160 C. will positively sterilize olive oil, glycerin and liquid paraffin without injury to the substances, the bottle or the cork. He used wide-mouthed bottles holding from 15 to 30 c.c., stoppered them with a stout cork and was careful not to fill them more than two-thirds full. As the boiling point of glycerin is at 290 C. and that of the other substances mentioned probably equally high, they do not boil at 160, and there is no danger of forcing out the cork.

THE OPENING MEETING OF THE ASSOCIATION

Tuesday Morning, June 17

The opening general meeting of the Association was held in the Minneapolis Auditorium, and was called to order at 10:30 a. m. by the President, Dr. Abraham Jacobi, New York.

Ex-Presidents, members of the Board of Trustees, and other officers of the Association occupied seats on the platform.

Rev. James E. Freeman, D.D., Minneapolis, delivered the invocation.

Addresses of Welcome

President Jacobi introduced George Edgar Vincent, Ph.D., LL.D., President of the University of Minnesota, who delivered the following

WELCOME FROM THE UNIVERSITY OF MINNESOTA

Mr. President, Members of the American Medical Association, Ladies and Gentlemen: To me has been assigned the grateful duty in behalf of the educational interests of this community of bidding you welcome. I omit the well-worn phrases, the time-honored jocularities, the traditional cynicisms, the rhapsodic tributes, with which you are so often greeted. By violating the conventions let me hope that I convince you of the sincerity of our respect and good will.

The state of Minnesota maintains in Minneapolis and St. Paul a center of scientific investigation and of liberal and professional education. To the members of this university community it is a keen satisfaction to welcome this distinguished body of men and women, dominated by the scientific spirit and by educational ideals. In days when specialization seems to isolate investigators from each other, it is well to remember that fundamental to all specialized tasks are a method and an aim which bind all separate inquiries into one inspiring, cooperative search for truth.

One division of the university feels a peculiar interest in your presence. The medical school extends to you fraternal greetings of genuine warmth. In this school the university takes just pride. To its upbuilding the medical men of these cities have devoted themselves loyally. Under conditions sometimes disheartening they have persisted with courage and unflagging zeal. Gradually the unification of medical education for the whole state has been achieved. Minnesota enjoys the distinction of having unified medical education under state control. The close association on the laboratory side between the medical school and the state board of health affords an efficient concentration. (Applause.)

The school is fortunate in having complete control of its own hospital, the capacity of which will, by recent act of the legislature, be increased to 175 beds. Inasmuch as this hospital receives only charity patients, certain complications which sometimes arise when hospitals are conducted on another basis are in this case happily avoided. Affiliation with the city hospitals of Minneapolis and St. Paul provides a wide range of clinical material and gives the school facilities for thorough instruction. An outpatient department under university control is taxed to the limits of its capacity.

While the medical school lays more stress on men than on buildings, it would be affectation to conceal the satisfaction which the institution feels in the new and completely equipped laboratories which have within the last two years been provided for the medical school. These represent an immense labor of study, planning and supervision by the medical staff.

If the medical school of the University of Minnesota is not satisfied with merely being in your Class A-plus, but has ambition to occupy a high place in that honored list, our friends will set this down to the natural hopefulness of this bouyant region. We do not count on creating consternation immediately in Boston, New York and Baltimore, but we do hope to win increasing recognition for devotion to high standards and ideals or undergraduate teaching, the development of graduate instruction, and the fostering of medical research. We look forward to the time when the medical school will be brought into close relationship with the various hospitals and institutions of the state, so that through this agency the university may increase the scope and efficiency of its service to the commonwealth. (Applause.)

One aspect of medical education gives us concern. We rely on your Association to do its part in solving the problem. The number of years required for medical education and the consequent expense are in danger of limiting the area of ability from which the medical profession is recruited. To the plea that individuals have a right to a short and easy road to professional practice we may well turn a deaf ear. Here, as elsewhere, the interests of the public transcend those of the individual. A cheap medical education is the most expensive for the community. But to limit candidates for medical practice to the economically strong is a wholly different thing. There is reason to believe that men and women who might contribute much to the progress of medicine are now excluded from candidacy. A system of scholarships, maintained through private endowment, through state aid, through the cooperation of an Association like yours, might go far toward meeting this difficulty. The profession must be open to the best ability, wherever found. (Applause.)

This community is honored by the presence of men and women who are dominated by the scientific spirit. In a sense, with the advance of knowledge the area of disagreement is narrowed. As phenomena are investigated and their laws formulated differences of opinion must yield to the convincing tests of truth. As the underlying medical sciences develop and as clinical research extends its area, sects and schools in medicine must lose their significance and surrender to a science that knows no fundamental antitheses and conflicts. There will always be a frontier on which investigators offer rival theories and where speculation must thrive, but research leaves behind it a widening territory of ascertained and indisputable truth. You are to be congratulated on the passing of parochial conceptions of your profession, and on the growth of a scientific cosmopolitanism. (Applause.)

You are to be felicitated also on the socialized ideals of your profession. Less and less is medicine regarded as a personal career—more and more it is exalted as a public service. This changed point of view is a part of the spirit of the times. The old individualism is yielding to the new consciousness of the community, of new loyalty to the common life.

Your Association's conception of your social mission is admirably manifested by your interest in preventive medicine and public health. To those cynics who see in your profession a conspiracy to keep people ill and hence productive of fees there seems something sinister and incredible in your apparent desire to keep the public well. But your sincerity and social spirit will be vindicated as you push your campaign of popular education, and forgetting the older ethics of aloofness from public affairs you make yourselves felt more and more in the national life. (Applause.)

By your interest in medical education, your attempts to standardize institutions, your plea for education not only of practicing physicians but also of public health officers, you are rendering service which cannot fail to gain recognition and hearty approval. We who are struggling with the chaos of our educational system need your aid and are grateful for what you are doing.

In nothing have you shown a truer conception of your duty than in your campaign for popular education concerning individual and public health. There was a time when many members of your profession were contented to give their opinions with dogmatic authority. They expected to have these accepted by a docile public. You realize the difference between an aristocratic bureaucracy and a democracy. In the former the experts may in true paternal fashion command submissive masses and expect unquestioned obedience, but in a democracy the experts must take their fellow citizens into their confidence and must tell them not only what to do but why. In your campaign, therefore, for public education, you are not only rendering an essential service, but you are conforming to the true principle of democracy, which must be built not on the unwilling submission, but on the intelligent cooperation of the people. (Applause.)

Finally, you are to be congratulated on the creation and perpetuation of the professional spirit. A man can be himself only as he lives the life of cooperation and comradeship. A profession is a collective personality. Each individual makes contribution to the whole, it is true, but the materials and the inspiration for his own development, are drawn from the common store. Only as men have the imagination to see their lives in their wider relationships, only as they lose their petty personal interests in larger and more generous common purposes, can they attain the true possibility of personal growth. May your profession gain steadily in its loyalty to truth in its disinterested devotion to the common life, in its high ideals of personal integrity and of professional obligation. (Loud applause.)

WELCOME FROM THE CITY OF MINNEAPOLIS

Hon. Wallace G. Nye, Mayor of Minneapolis, was introduced and said:

Mr. President, Members of the American Medical Association, Ladies and Gentlemen: Minneapolis, dressed in her finest summer robe, is proud of the opportunity now hers of entertaining and paying hostage to so distinguished a group of visitors.

If I were able to express to you a welcome so hospitable and so complete in the words at my command, and do so in all its graciousness and sweetness, I am sure the honey-bees would swarm around my face (laughter), for Minneapolis has looked forward to your coming with pleasant and pleasurable anticipations of the helpful discussions which are to take place. By your meeting here, she hopes to form new acquaintances within her gates. Minneapolis bade me to say that if any act is committed, or omitted in the arrangements for your convenience or your pleasure in any degree, which will lessen their completeness, we trust you will not attribute it to a lack of desire on her part, but to her youth and inexperience.

Minneapolis is a maid of tender years. She has not attained full stature. She has only recently begun to take on those charms of form and graces of manner which characterize her years of maturity. Half a century spans her life and fewer years than that mark the period of her principal growth. And she has been growing some but always in a peaceful sort of way. She has never had any great affliction. She has been a fortunate maiden who has never suffered any great calamity. In fact, she has never had any affliction at all, except occasionally growing pains (laughter) and those, I might add, have always been most keenly felt by her taxpayers. (Laughter.)

Minneapolis is pleased to have you here because the opportunity of your coming enables her to display her charms and for you to become acquainted with them. Her motives are not mercenary. She wants you to enjoy yourselves. She wants you to see her flour-mills, hospitals, factories, banks and other institutions which go toward the making of a strong community; but more than all these, she wants you to see the splendid efforts she has made to keep business away from the doctors by supplying her people with health-giving outdoor resources for happiness and the joy of living. (Applause.) She wants you to believe that her joy in your coming is unselfish, although she realizes that in spite of the resolution recently passed by your executive body, you will be obliged to split some of your hard-earned fees with her. (Laughter.) And if any of you, unable to tear yourselves away from her charms, become members of our community, she will bid you welcome to her happy family although with a warning that she will not decrease her efforts to lessen the demand for members of your noble profession. (Applause.)

We want you to see our parks, our playgrounds, our public
baths, for Minneapolis in the last few years has been giving
special attention to cleanliness, to sanitation, to fire preven-
tion, to pure air and pure food and drugs. We are doing
something along all these lines and with your coming, it will
be helpful to us. (Applause.)

We are delighted to have you here because of the proud
and prominent position which the American Medical Associa-
tion occupies in the world, and because we have learned that
your mission is not to serve the local members of this pro-
fession but to serve mankind. Minneapolis knows from years
of experience that you are intensely interested in the conserva-
tion of the health of the people in this and other com-
munities, and so not only in this community, but in every
community throughout this country, your members are unself-
ishly making themselves active forces in lessening the causes
of diseases and sickness and in prolonging human life.
(Applause.)

Finally, Minneapolis gladly expresses the hope that this
meeting will prove helpful to you, and helpful to the world,
and that your stay will be very pleasant. (Applause.)

WELCOME FROM THE STATE OF MINNESOTA

Hon. Adolph Olson Eberhart, Governor of Minnesota, was introduced and said:

Mr. President, Members of the American Medical Associa-
tion, Ladies and Gentlemen: After listening to the splendid
addresses of welcome by the President of the University of
Minnesota, and by the Mayor of Minneapolis, I shall be very
brief. As governor of the state, I extend to you a hearty
welcome on behalf of our citizens. We are glad to have
you with us. We trust you will spend your money freely
while you are here. It is a pleasure personally for a man in my position to sit here and look into the faces of so many honest people. (Laughter.)

The mayor spoke about the beauties and attractions of Minneapolis, but said very little about the city across the way. It is true, they are twin cities, and they constitute a considerable portion of the state of Minnesota. Both cities consider themselves very important—a thing you would find out if you were governor. (Laughter.)

It is very essential that we should have so many doctors here with us at this time when our board of health is considering the question of certified milk. Pure milk is a godsend to all of us. It has been jokingly remarked that if there are not enough microbes in the milk, the milk-dealers connect the milk with the water system. (Laughter.)

But, seriously, gentlemen, you are doing a great work. You are achieving results. The greatest service that can be rendered to mankind must come from the medical profession, and Minnesota is one of the states which to-day is actively engaged in educating the people with regard to public health, the prevention of disease, and how to prolong life. (Applause.)

We hope this session of your Association will be the best in its history, and that it will result in good not only for the great state of Minnesota, but for every country and every people in the civilized world. (Applause.)

Dr. Frank C. Todd, Chairman of the Local Committee on Arrangements, called attention to the scientific program and the receptions and entertainments announced.

Dr. Jacobi, in introducing Dr. Witherspoon, said:

"Before vacating this place, I beg leave to say that I had hoped for an opportunity to express some thoughts and wishes uppermost in my mind; not that I believe that there is anything that I know or could suggest beyond what your Trustees and Councils are able and eager to do for this Association of ours. There are but two principal suggestions I made before the House of Delegates yesterday. I repeat them here because after all they may concern you *intimately*. One was that the House of Delegates should so arrange its meetings that in our Section meetings we should not be deprived of the cooperation of the men who owe their places in your House of Delegates to the recognition of their *superiority*; nor is it proper that their services rendered to us should rob them of their participation in scientific discussions. Another plea is that the Secretaryships in our Sections should be made, if possible, permanent offices. My reasons are detailed in a brief valedictory which will appear in THE JOURNAL. All of this I repeat here because I was ever of the opinion that the democracy of our institutions, political, social and scientific, justifies the information, and participation of all.

Now, members and fellows of the American Association:
after having enjoyed the honorable duty of presiding over
you, the moment has arrived to bid you goodbye, but only
to join your ranks. These sixty years I have dwelt amongst
you and our people a willing and grateful disciple and cooper-
erator, and now I gladly return to where I belong. I leave
this office in the charge of your choice, a good, staunch,
forceful man, known to us all, to whom it has been intrusted;
known to the young students of the land, whom he has
matured; to the public at large for his eloquence and for his
teaching. I have learned to appreciate him as a bright and
warm-hearted representative of the practical American ideal-
ism, which has been and is to remain the soul and backbone
of our sacred profession and of this country of ours, of the
present and of the future. I do not call his name—I need not
introduce him, he has come into his own. (Applause.)

President Witherspoon (turning to Dr. Jacobi) said:

Honored Sir, your remarks concerning me are not only
highly appreciated, but I would do violence to my own feelings
did I not say to you on retiring, that while your country
has given to this many grand and noble things, especially
medicine, none in my judgment is comparable to the high
and noble idealism which your life among us has taught. In
my association with you I have not only appreciated your
high sense of honor and earnest desire to do everything you
can for the moral uplift of the profession, but I have learned
to revere your high and noble character, respect your great
learning, and by intimate association to love you. (Applause.)

After these introductory remarks, President John A. Witherspoon, Nashville, Tenn., delivered an address entitled "Our National Health Problem."

The opening meeting then adjourned.

PROCEEDINGS OF THE MINNEAPOLIS SESSION

MINUTES OF THE SIXTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT MINNEAPOLIS, JUNE 16-20, 1913

(Continued from page 2019)

HOUSE OF DELEGATES

Second Meeting—Monday Afternoon, June 16

The House of Delegates reconvened at 2:10 p. m. and was called to order by the President.

Dr. D. Chester Brown, Connecticut, Chairman, presented a report from the Committee on Credentials, naming the delegates seated, and at the conclusion of the report said:

> There have been two applications made for membership in the House of Delegates, one by Dr. George T. Welch, New Jersey State Medical Society. At the last session of the House of Delegates, at Atlantic City, a standing rule was adopted that alternates should be specifically designated for delegate. In this instance, New Jersey has appointed delegates, but did not designate the particular alternate for delegates. Dr. Welch is a duly elected alternate, but has no credentials to present showing that he has been given authority to act for any delegate on the list.
>
> The same is true of Dr. James W. Dinnen, of the Indiana State Medical Society. As neither of these gentlemen has presented any credentials to the Committee on Credentials, we have decided that they cannot be seated in the House under the standing rule.

Dr. E. T. Abrams, Michigan, moved that the rules be suspended and that the two gentlemen named, who came without credentials, and who were elected alternates in the regular way, be seated.

Motion seconded.

Dr. E. J. McKnight, Connecticut, moved that this matter be laid on the table until to-morrow afternoon.

Motion seconded and carried.

Dr. Wendell C. Phillips, New York, moved that the last two lines of Standing Rule No. 1, "With an alternate designated for each delegate to act in his stead when so authorized by the principal," be rescinded.

Motion seconded and carried.

Dr. E. J. McKnight, Connecticut, moved a reconsideration of the vote whereby the matter relating to Standing Rule No. 1 was laid on the table until to-morrow afternoon, and that it now be taken off the table for consideration.

Motion seconded and carried.

The motion to seat these alternates was then put and carried.

The minutes of the previous meeting were read and approved.

Report of the Committee on Red Cross Medical Work

The President called for the report of the Committee on Red Cross Medical Work, and as there was no member of that Committee present, Dr. Arthur T. McCormack, Kentucky, moved that the report be referred to the Reference Committee on Reports of Officers.

Motion seconded and carried.

The report follows:

To the Members of the House of Delegates of the American Medical Association:

The Committee on Red Cross Medical Work was created at the 1912 session as the result of a communication from the Chairman of the Central Committee of the American Red Cross requesting the appointment of a committee to consult and advise with a committee of the American Red Cross as to the best arrangement to be made for the medical relief in times of disaster. This request was presented by President Welch at the Session of 1911 held at Los Angeles, and submitted to the Reference Committee on Report of Officers.

The Reference Committee concurred in the recommendation of the President and "believed it to be most appropriate and desirable that the Association should give its approval and assistance to the American Red Cross in times of national disaster and through its local organizations should select men of probity and recognized professional competence to be the agents through whom the beneficence of the nation is bestowed.

"It is recommended therefore, that the President be authorized to appoint a committee of five to consult and to advise with a committee of the National Red Cross for the purpose above stated and to report at the next annual meeting such scheme of cooperation as may be agreed on."

The President appointed a committee and at the session held at Atlantic City in 1912 the committee submitted an excellent report signed by A. T. McCormack, chairman, Charles A. L. Reed, Miles F. Porter and H. L. E. Johnson. The report points out the urgent need of an effective medical force throughout the country which may be available without delay in case of a local disaster to cooperate with the American Red Cross. The committee recommended that a standing committee of three on Red Cross medical work be constituted by an amendement to our By-Laws, and emphasized the importance of the work not only for the relief of distress in times of war and disaster, but also in the prevention of needless suffering and sacrifice of life from faulty sanitary and housing conditions, and from industrial and other violence. This report was referred to the Reference Committee on Amendments to the Constitution and By-Laws, and the following By-Law known as Section 8 of Chapter VIII was adopted:

> SECTION 8. COMMITTEE ON RED CROSS MEDICAL WORK. The Committee on Red Cross Medical Work shall consist of three members, one of whom shall be appointed by the President upon the nomination of the Surgeon General of the Army, one upon the nomination of the Surgeon General of the Navy, and the third member of the committee, who shall be its chairman, shall be appointed by the President and nominated to the Red Cross as the representative of this Association on its Relief Board. This committee is authorized to cooperate with the National Red Cross and shall have advisory supervision over state and county committees having charge of the same subject and shall be empowered to act for the Association in matters involving medical personnel in times of disaster, provided that it shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees.

Pursuant to the action of the Association, President Jacobi on September 14, 1912, appointed a Committee on Red Cross Medical Work composed of Lieut. Col. Francis A. Winter, Medical Corps, U. S. Army; Surgeon E. M. Blackwell, Medical Corps U. S. Navy and George M. Kober as chairman.

Your committee after several consultations with representatives of the American Red Cross begs to submit the following, as showing its conception of what is desired and its estimate of what should be done to accomplish the purpose:

1. It is believed that the American Red Cross desires to enlist the sympathy of the medical profession in general, and the active cooperation of certain representative men of that profession in time of disaster or other emergency which may occur in any section of our country.

2. It is understood that the Red Cross desires to bring duly qualified medical men into a position to direct or participate in the medical work and to cooperate with the nursing and local lay services which represent the organization at differ-

ent places, in order that there may be coordination of effort between the various elements of the Red Cross service.

To bring about these results the committee adopted the following procedure:

There are about 1,986 component societies affiliated with the American Medical Association. The committee has communicated with the secretary of each County Society by sending to that official a circular letter, appended hereto and marked Exhibit A.[†] The responses to this circular are expected to supply the names of five physicians to serve as members of a County Committee on Red Cross Medical Work, two of whom shall be the President and Secretary of the County Medical Society *ex-officio*, the other three members shall be selected by the President of said Society, preferably from the censors, councilors or the executive committee. In case of disaster requiring the intervention of the Red Cross, that organization will be in a position to call upon these County Committees to select a sufficient number of qualified medical men for service in the Red Cross medical work, and to advise with the representatives of that society on questions of medical policy and procedure. The Red Cross will thus be assured of the services of qualified medical men.

3. Having secured the appointment of County Committees with names and addresses, it would remain for the Red Cross to effect a concert of action between the various activities in any community, by such measures, and by such individuals within its organization as might seem best to bring about the result.

The recommendations of the committee, affecting the method employed in securing the appointment of County Committees on Red Cross Medical Work are set forth in detail, in the appended circular letter, which was approved by the Executive Committee of the American National Red Cross and issued Feb. 14, 1913.

Your committee takes pleasure in reporting that up to April 30 fifty-seven County Medical Societies in twenty-four states have organized committees, and quite a number of secretaries of County Societies have acknowledged the receipt of the communication and promised to bring it to the attention of their respective bodies at the next meeting.

Alabama	1	Missouri	4
Arkansas	2	Nebraska	3
California	2	New York	1
Dist. of Columbia	1	Ohio	1
Florida	2	Oklahoma	2
Georgia	1	Pennsylvania	3
Illinois	10	Rhode Island	1
Indiana	2	South Carolina	2
Iowa	5	Tennessee	1
Kentucky	4	Texas	4
Louisiana	1	Virginia	1
Mississippi	1	West Virginia	2

The committee believes that the disasters of floods, tornadoes and forest fires which have swept over different sections of the country emphasize the need of prompt organization of County Committees on Red Cross Medical Work in all parts of this country. In order to keep the subject before the profession and to reduce the expense of correspondence, which has been defrayed by the Red Cross, to a minimum, the secretary of the American Medical Association, has caused our circular letter to be reprinted in the *Bulletin* in such a manner that it can be removed and placed with the memoranda of the secretary of a county society for consideration and action at the next meeting of that body.

Such a follow up system may become necessary from time to time until the desired object is attained.

The American Red Cross Magazine for April, 1913, also published the circular with the following words of appreciation:

> "Many replies are coming from County Medical Societies indicating a cordial acceptance of the committee's plan. It may be said in this connection that the medical profession has always been generous and responsive in the highest degree in all its relations with the Red Cross. The purpose of this new plan is to provide a simple system by means of which the cordial relationship may become more effective."

In conclusion your committee expresses the hope for prompt action by all Medical Societies in affiliation with the American Medical Association so that there may be a comprehensive system of cooperation between the Red Cross and the medical profession of the United States.

When this is accomplished we may expect that in addition to an effective organization for emergency relief work these committees will prove strong auxiliary forces to both the Council on Health and Public Instruction and the American Red Cross in their general campaign for the mitigation of human suffering and the saving of lives.

Respectfully submitted,

Geo. W. Kober,
Chairman.
F. A. Winter,
Lieut.-Colonel Medical Corps, U. S. Army.
E. M. Blackwell,
Surgeon U. S. Navy.

Dr. Frank B. Wynn, Indiana, presented the report of the Committee on Scientific Exhibit, as follows:

Report of the Committee on Scientific Exhibit

To the Members of the House of Delegates of the American Medical Association:

The present Scientific Exhibit, in point of size, variety and uniform excellence, has not been surpassed, if equaled, at any previous meeting. The Catalog of Exhibits and Program of Demonstrations, herewith submitted, offer strong proof of the statement.

The superb housing afforded this year, with every possible arrangement for proper classification and demonstration, appeal with great force to scientific workers who have sometimes chafed under the unavoidable shortcomings of quarters offered. Let us rejoice at our present good fortune, but have a care lest it spoil us for accepting gracefully at subsequent meetings what necessity may have to offer.

In the opinion of the Committee, $1,000, annually, is ample for the maintenance of the exhibit, as at present conducted. It is recommended that this sum be appropriated for the succeeding year.

It is urged that a Committee on Awards be appointed at once in order that they may have ample time to inspect and pass on exhibits.

It would not be fair to conclude this report without some general references to this splendid array of scientific material and the sixty or more scientists who have devotedly labored, without money and without price, to bring the exhibit to a successful consummation. Every member who fails to visit it will be guilty of neglect of duty and of opportunity.

A careful perusal of the exhibit will show that certain features are emphasized. It is gratifying to note that anatomy and physiology claim larger representation than heretofore; including, besides many beautifully prepared anatomic specimens, several research exhibits.

Surgical pathology is given marked prominence in a large amount of gross and microscopic material, very carefully demonstrated.

Cancer and infectious diseases furnish several most interesting research exhibits and demonstrations.

Noteworthy is the series of exhibits showing newer methods of anesthesia and physiologic researches on the subject.

The Roentgen-ray exhibits treat chiefly gastro-intestinal diagnosis, and public health exhibits give conspicuous attention to the milk problem.

Perhaps the most noteworthy feature, however, consists in the large number of exhibitors who have consented to make formal demonstrations at stated hours—thirty-eight in all. For long the effort has been made to convince exhibitors that demonstrations were a great advantage to them as well as for the wider educational influence of the exhibit. That this evolution has come slowly offers greater certainty for its permanence.

We may summarize briefly some of the present purposes and aims of the Scientific Exhibit:

[†] Exhibit A, a circular letter, p. 161 of the Hand Book, is omitted here.

1. It should be the avenue through which research workers from year to year present the fruits of their investigations for consideration and friendly criticism by fellow workers. The same things should likewise be presented to practitioners in order that they be kept alert as to fundamental scientific progress in medicine.

2. Effort is being made to coordinate more and more the work of sections with the exhibit. The worthy features of a paper are thus visualized and vitalized. It helps both reader and hearer, and tends to diminish tedious compilations. Several of the papers read at this session are illuminated most admirably by exhibits. Such often bring the convincing evidence to the observer which the written article will not bring to the reader. Papers too often and too easily are padded; the scientific demonstration shows the naked truth. The Scientific Exhibit becomes to the real scientist a forum in which he may proclaim and prove his contentions, or place on his critics the burden of disproof.

3. The Scientific Exhibit is seeking to eliminate clannishness among scientific workers and to democratize their labors for the common good of the profession. Snobbery should not belong to medical research. The scientific investigator who holds himself aloof from the practitioner is keeping the leaven out of the bread of professional life. On the other hand, the practitioner of medicine or surgery who looks askance at laboratory methods as visionary and unpractical is building his house on the sands of error and not on the rocks of truth, and it will not stand.

With the rapid growth of the Association and the multiplication of sections, there is a centrifugal tendency which is not unmixed with evil. Should there not be some converging or restraining influence which will continue to bind the work of all the sections firmly to the fundamentals which underlie all progress in any branch of medicine? What agency could better accomplish this than the Scientific Exhibit?

In conclusion, what shall we say of the men who have so industriously and unselfishly labored to make this exhibit a success—sixty or more of them? Not only has their service been gratuitous; it has entailed great expenditure of labor, time and money. The animus of their interest and participation lies in the scientific spirit which leads them on into medical idealism. Thus have labored Dr. Louis B. Wilson and Dr. Thomas G. Lee on the committee, and the large number whose names appear in the program. We owe to them a debt of gratitude which it is impossible to repay. We can only say of them and their predecessors that they have been heroes in the army of science. In the gallant company of our ranks have marched Carroll and Ricketts. Of this sort of stuff are those loyal workers and supporters of the Scientific Exhibit made. All honor to them! We cannot do less than show our appreciation by attentive patronage of the splendid exhibits which their efforts have brought to successful fruition.

Respectfully submitted,

FRANK B. WYNN, Chairman.

On motion, duly seconded, a rising vote of thanks was extended to the Committee for its work.

Dr. Arthur T. McCormack, Kentucky, moved that a committee of three on awards be appointed by the President.

Motion seconded and carried.

The President appointed on this committee Drs. William T. Councilman, Joseph A. Capps and W. C. Woodward.

Report of the Committee on Anesthesia

Dr. W. D. Gatch, Indiana, Chairman, presented the report of the Committee on Anesthesia, as follows:

To the Members of the House of Delegates of the American Medical Association:

This committee, shortly after its appointment, began to consider in what manner its work could be applied to the best advantage. Its members were all of the opinion that the subject of anesthesia is too broad, and that its practical bearings are too important to be reviewed adequately in a brief report. They felt that the time has come when this committee should do for anesthesia what the Council of Pharmacy has done for pharmacy, namely, make a thoroughgoing, critical investigation of every phase of the subject. For the following reasons we believe that there is need for such an investigation:

1. Communications from surgeons and anesthetists in all parts of the country show that there is a general dissatisfaction with our present results in anesthesia. Deaths and postanesthetic complications are far too common.

2. There has of late been a tremendous interest in everything which has to do with anesthesia. The physiology, pathology and pharmacology thereof are being studied by many investigators and numerous new methods are being tried. Ether is now being administered by intratracheal and intrapharyngeal insufflation, intravenously and intramuscularly. The use of nitrous oxid is being warmly advocated, either alone or combined with ether and sedative drugs, or combined with local anesthesia. Finally, various methods of nerve blocking, local anesthesia and spinal anesthesia are being used. The proper evaluation of these procedures requires thorough investigation, for there is danger that at least in unskilful hands many of them may cause great harm, and that, therefore, some very useful methods may fall into discredit.

3. Since the very discovery of general anesthetics practically no new agents have been introduced which have proved as good as those first employed—ether, nitrous oxid and chloroform. All of these have obvious disadvantages, and it is not unreasonable to hope that scientific pharmacology may be able to discover new and better anesthetics. An investigation of the kind we advocate might do much to stimulate work with this object in view.

4. The nature of the action of anesthetics on the tissues, and especially on nerve tissue, is still very imperfectly understood, though of late years considerable additions to our knowledge have been made. Likewise there are many points in the physiology and pharmacology of anesthesia which require further investigation. It is obvious that to solve these fundamental problems would be of great advantage to practical anesthesia.

5. The instruction of medical students and interns in anesthesia even in many of our best hospitals and medical schools is often inadequate, and our arrangements for securing the best possible attention for each patient who is anesthetized are frequently poor. On this particular subject we shall have more to say later.

6. No adequate critical review of the various matters we have enumerated is at present to be found in any language. We believe that such a work, published in a series of pamphlets, would be of great value in directing future investigations along useful lines, and as a guide to the solution of the daily problems of the surgeon and anesthetist.

For these various reasons this committee decided to begin the preparation of a comprehensive review of the entire subject of anesthesia. We realized the magnitude of the task we were undertaking, and that considerable time would be required for its completion; nevertheless, we felt that the object in view was sufficient justification for our temerity. Each member of the committee was given a phase of the subject which he was best qualified to treat, and much actual work has been done. Statistics have been collected from hospitals and medical schools, the literature has been studied, and some original investigations carried out. But the labor has been so great that none of the committee is at present ready to make a final report on his part of the subject. We must, therefore, ask for an extension of time in which to complete this work. In addition to the work we have just described, the committee has arranged for a demonstration covering the recent work in anesthesia, in the Department of Scientific Exhibits. This, we hope, will enable all who are interested in the subject to learn from the investigators themselves much of what has recently been accomplished in this field.

On one particularly important subject the committee feels that it should make some specific recommendations at this time, since it feels that it has already sufficient information to make the same of value. This subject is the regulation of the administration of anesthetics in hospitals and elsewhere, and the instruction of medical students in anesthesia.

That our results in the field of anesthesia are no better is to be attributed to the general failure to take a broad view of the relations of anesthesia to general medicine and surgery, to a lack of proper organization of our hospital staffs, and, finally, to a lack of proper training of medical students and interns in anesthesia.

Good results in anesthesia depend not only on skilful administration of the anesthetics, but also on careful preliminary examination and preparation of the patient, intelligent cooperation of the surgeon and anesthetist, and proper postoperative care. To secure the necessary attention to each patient requires a hospital organization especially adapted to this purpose. In each hospital some one man must be made responsible for good results in anesthesia. He must be given the authority to see that every patient is carefully examined and prepared for operation; he must confer, when necessary, with the surgeon concerning the anesthesia, and he must be given charge of the care of the patient during his recovery from the same. He must have the power to instruct and direct the nurses and interns in the part of the work which they may be called on to do. Finally, he must be held responsible for every complication or accident due to anesthesia. A competent man provided with the authority we have outlined and cooperating with his surgeon can, we believe, at the present time prevent most of the deaths and other calamities which are all too frequent under the present system. A good salary together with the interest and importance of the work will secure plenty of men capable of filling such a position in any city of the country.

In certain hospitals it may not be desirable to employ a special man for this work. This is true of university hospitals and private hospitals directed by members of their own staff. In institutions of the former class, in which men serve an apprenticeship of several years on the resident staff, it is an excellent plan to place some member of the same in full charge of the anesthesia for a certain period of his stay. The experience is a valuable part of his training for surgery. Part of his duty should be the investigation of problems of anesthesia and the instruction of interns and medical students in practical anesthesia. He should also train a successor to himself.

In private hospitals the chiefs of the clinics may themselves look after the broader aspects of the work, and intrust the actual administration of the anesthetic to properly qualified assistants.

We believe that trained anesthetists, given the power we have defined, should be employed by all municipal and other charitable hospitals. In that large class of hospitals without a fixed staff, and in which every physician is allowed full control of his patients, it is doubtful if the plan of organization described is possible. For operations in such institutions the problem of securing good anesthesia is largely the same as for operations done elsewhere than in hospitals. The responsibility in respect to the anesthesia in all such cases must rest with the surgeon. In many cases, however, such hospitals can employ a good anesthetist to instruct their nurses and interns, and be at the service of any surgeon who requests his assistance. A tactful and efficient man in such a position will frequently be able to control practically the entire anesthetic situation of his hospital. The expense of his employment is a good investment for the hospital, even from a financial standpoint.

The instruction in anesthesia of medical students calls for consideration in this resport. We believe that the importance of the subject requires that every student receive adequate instruction therein. This should not be limited to the mere administration of anesthetics, but should be broad enough in scope to give the student an intelligent conception of all the factors which must be taken into account in planning the anesthesia for each patient. The physiology and pathology of the respiration and circulation should be reviewed; also the effects of the various surgical postures, of hemorrhage, of trauma, of decreasing the bodily warmth, etc. The pharmacological action of chloroform, ether, nitrous oxid, morphin, hyoscin, atropin, strychnin, cocain, novocain, and various other drugs used in anesthesia, should be studied, preferably by means of experiments on animals. With the study of each drug, the use and dangers of the same in actual practice should be pointed out. After this preliminary study the student should be given as many clinical demonstrations of anesthesia as possible. In each of these he should know the results of the physical examination of the patient, the trouble for which the operation is performed, the preparation for operation, and the postoperative care. He should also follow every step of the administration, taking records at frequent intervals of the patient's pulse, blood-pressure and perhaps temperature. He should observe at least a dozen cases in this manner. Such instruction can be given to small groups of five or six students. Nothing short of such a course will give the student an adequate knowledge of modern anesthesia. We condemn the practice of allowing the student to administer the anesthesia except under very strict supervision—a supervision which should also be given him even in his intern year.

The preliminary work described above is already given in the laboratory years of the medical course. All that the plan we advocate requires is that this work be reviewed in the clinical years and its practical bearings pointed out. The actual demonstrations will necessitate hardly a change in the schedule of most schools. For at each operative clinic a small group of students can be called to study the anesthesia.

Respectfully submitted,

W. D. Gatch, Chairman.
T. S. Cullen.
Evarts A. Graham.
James P. Gwathmey.
Reid Hunt.

It was moved that the report be received and the Committee continued.

Motion seconded and carried.

Report of the Committee on Memorial to the Medical Officers Who Lost Their Lives in the Civil War

The President called for the report of the Committee on Memorial to Medical Officers Who Died in the Civil War, and in the absence of the Chairman of this Committee, Dr. Arthur T. McCormack, Kentucky, moved that the report be received and approved by the House of Delegates.

Motion seconded and carried.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

At the sixty-third annual session of the Association held at Atlantic City, June, 1912, this committee reported progress and was continued.

At the last meeting of your Central Committee the chairman, Col. Wm. C. Gorgas, on account of the long distance at which he is removed from the other members resigned the chairmanship, and Dr. S. Weir Mitchell was appointed in his place.

The formation of the General Committee of one from each state has progressed rapidly since the issuance of an explanatory circular letter to one delegate in each state requesting nominations to your Central Committee. Those delegates who have been addressed and thus far have failed to report are urged to respond promptly, giving the name of a surgeon in good standing and who is a member of the American Medical Association, if not able to give the name of one who served in the Civil War.

The complete list of the Naval Surgeons who lost their lives during the Civil War has been received from the Bureau of Medicine and Surgery of the Navy Department at Washington, D. C.

Surgeon General Rupert Blue, of the Public Health Service, has accepted the position on the committee made vacant by the lamented death of Gen. Walter Wyman.

Your Central Committee felicitates itself on the realization that both in Illinois and Georgia memorials embodying the sentiments advocated in the first report of this committee are about to be erected. We are still too close to the Civil War to measure its leaders in perspective, but it is not too early to affirm that the surgeons, on both sides, from the beginning to the end of that fratricidal conflict helped to make history which endures to-day as a permanent tribute to the bravery and unselfishness of the medical profession.

The day of reconciliation between us will not be in the future—it is now. A few of us who were at Gettsburg fifty years ago will be there next month—and Oh, what a change! "To one who looked down on the three terrible days of that hot July of 1863 such a commemoration as will take place would have seemed incredible. The reconciliation between the North and the South, now complete, is the most sublime moral miracle in modern history. It has come about through no concessions of the principles that were fought for—through no surrender of the convictions which lay back of that mighty struggle—but through an acceptance of the lessons of a terrible experience—through a new comprehension, in one section of the principle of nationality, and a recognition in the other of the courage and integrity of purpose of its former antagonists. In the words of the brave General Gordon of Georgia, 'We fought until the furnace of war melted all our discords and molded us into one homogeneous nation.'"

When the appropriate shaft contemplated by your committee shall have been erected, it will, in a small degree, demonstrate our appreciation of the noble services of those surgeons who gave up their lives in the performance of duty to a common humanity.

All the expenses incurred in the work thus far have been paid by the committee. The committee asks to be continued with the privileges, instructions and appropriations authorized by the House at the Atlantic City meeting of 1909.

Respectfully submitted,

S. WEIR MITCHELL, Chairman,
WILLIAM C. GORGAS,
G. LANE TANEYHILL, Secretary,
W. W. KEEN,
G. B. THORNTON.

Report of Committee to Arrange for Clinic Days

Dr. Charles L. Mix, Illinois, Chairman, presented the report of the Committee to Arrange for Clinic Days, as follows:

To the Members of the House of Delegates of the American Medical Association:

The Committee to Arrange for Clinic Days reports as follows:

One of the members of the Committee, Dr. Alexander Lambert, having resigned, his place was filled, at the suggestion of your Chairman, by President Abraham Jacobi. He named as the fifth member of this Committee Dr. James E. Moore of Minneapolis, who had already been appointed on a similar Committee on Clinics as Chairman, by the Minneapolis Local Committee on Arrangements.

By the appointment of Dr. Moore as a member of the Association's Committee on Clinic Days, the work of the local committee and of the national committee was perfectly harmonized. Your chairman arranged for a meeting in Minneapolis which he attended, at which Dr. James E. Moore was appointed as the direct representative of the Committee of the American Medical Association. He has, at the cost of infinite trouble, succeeded in arranging for the program to be given to-day and immediately following the meeting of the Association.

The Committee makes the following five suggestions to the House of Delegates, as to the personnel of the Committee:

1. That the present Committee be made a continuous body.
2. That Dr. Dr. James E. Moore, appointed during the current year, serve four years more, his term of office expiring with the meeting of the American Medical Association in 1917.
3. That the four remaining members of the present Commitee retire in alphabetical order, Dr. John M. T. Finney, this year: Dr. Edward Martin, in June, 1914; Dr. Philip Marvel, in June, 1915; Dr. Charles Louis Mix, in June, 1916.
4. That the President of the American Medical Association each year appoint a new member of the Committee on Clinic Days, the new member to be selected from among the physicians in whose city the next meeting is to be held.
5. That the chairmanship of the Committee change each year, going to the oldest member of the Committee; Dr. Edward Martin to be Chairman in 1914; Dr. Philip Marvel in 1915; Dr. Charles Louis Mix in 1916, and Dr. James E. Moore in 1917.

The committee also makes the following recommendation; namely, that publicity be given to the program which it arranges, such program to be printed in the official program in THE JOURNAL of the American Medical Association, as well as in the hand-book for visitors at the annual meetings. It further suggests that such printed program be given publicity exactly equaling that accorded the regular program.

Respectfully submitted,

CHARLES LOUIS MIX, Chicago, Chairman.
EDWARD MARTIN, Philadelphia.
JOHN M. T. FINNEY, Baltimore.
PHILIP MARVEL, Atlantic City.
JAMES E. MOORE, Minneapolis.

On motion, duly seconded, the report was referred to the Reference Committee on Miscellaneous Business.

Report of the Committee to Advise with the British Medical Association

Dr. E. J. Goodwin, Missouri, presented the report of the Committee to Advise with the British Medical Association Concerning a Joint Meeting, as follows:

To the Members of the House of Delegates of the American Medical Association:

At the last meeting of the Association you passed a resolution authorizing the appointment by the President of a committee to confer with the British Medical Association with the view, or purpose, of holding a joint meeting. The author of the resolution, and distinguished Chairman of the Committee, Dr. A. T. Bristow of Brooklyn, N. Y., recently died. The Committee feels keenly the loss of his invaluable service. The President appointed in his place, Dr. W. W. Grant of Denver, Colorado.

In reply to a letter addressed to the British Medical Association, the following acknowledgment has been received:

BRITISH MEDICAL ASSOCIATION
429, Strand, London, W. E.
March 27, 1913

Secretary, American Medical Association,
535 Dearborn Avenue, Chicago, U. S. A.

Dear Sir:—

I have the honour to acknowledge your letter of the 13th of March, covering letter addressed to the British Medical Association.

This shall be laid before the Council of the British Medical Association at its meeting on the 23d of April next.

I am, yours faithfully,

(Signed) GUY ELLISTON,
Financial Secretary and Business Manager.

The committee asks to be continued, or that a new committee be constituted, to complete its task and that the House of Delegates empower it to arrange for such a joint session, should this be desirable, it being definitely understood that in the interim between meetings of the House of Delegates the committee shall act in cooperation with and under the sanction of the Board of Trustees.

Respectfully submitted,

W. W. GRANT,
E. J. GOODWIN,
THOMAS W. HUNTINGTON,
GEORGE H. SIMMONS,

It was moved that the report of the Committee be received, and that the Committee be continued.

Motion seconded and carried.

Dr. Goodwin called attention to the fact that it would be necessary to add another member to this joint committee to fill the place of Dr. Bristow.

The President stated that his successor would make this appointment.

Dr. G. Wythe Cook, District of Columbia, presented the following amendment to Section 4, Chapter 1, of the By-Laws by reading the following communication:

The following resolution was unanimously adopted by the Medical Society of the District of Columbia at a meeting held April 30, 1913:

WHEREAS, The American Medical Association June 4, 1912, adopted the following as Section 4, Chapter 1, of its By-Laws:

> EFFECT ON MEMBERSHIP OF REMOVAL TO ANOTHER STATE.—A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location, unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose territory such member has moved shall refuse him membership, the member shall be privileged to appeal to the Judicial Council of the Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal, he shall retain his membership in the American Medical Association through his original state association: And provided, further, that the term "the practice of medicine" throughout these by-laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions.

Be It Resolved, That the Medical Society of the District of Columbia is opposed to the foregoing section, because (1) its language is vague and ambiguous; and (2) each constituent association should, for obvious reasons, have full, absolute and unrestricted control over the admission of applicants to its own membership, without any authority, jurisdiction or power of interference in the matter on the part of the American Medical Association, or its Judicial Council; Therefore, be it

Resolved, That the Delegate of this Society to the American Medical Association is instructed to offer and promote the adoption of some such substitute as the following for the foregoing Section 4, Chapter 1, of the By-Laws:

> REMOVAL OF MEMBERS.—A member of a constituent association removing from the jurisdiction thereof may remain eligible for membership in the American Medical Association for a period of eighteen months following such removal, after which such eligibility shall cease, unless or until it is reestablished by his becoming a member of the constituent association of the jurisdiction in which he is then located.

On motion, duly seconded, the amendment was referred to the Reference Committee on Constitution and By-Laws.

Dr. Randolph Winslow, Maryland, presented the following communication, which was referred to the Board of Trustees:

HOME FOR WIDOWS AND ORPHANS OF PHYSICIANS, INCORPORATED
1615 BOLTON ST.,
BALTIMORE, June 1, 1913.

To the American Medical Association:

A year ago, at the meeting held at Atlantic City, we presented to your honorable body a proposal to turn over to it the property and franchises of our Home. We were then told that the proposal was received with applause, but that it was handicapped by being connected with a project for a tuberculosis sanatorium, which caused action on it to be delayed.

We, therefore, wish now—under more favorable auspices we hope—to renew our proposal. The property in question consists of a large 3½ story dwelling, on a lot 20 by 132 feet, situated in the best residential section of Baltimore, and we own it in fee.

Our Home is chartered under the laws of Maryland and is designed to care for all destitute widows and orphans of reputable physicians who apply—without territorial limitation; i. e., its scope is already national. It is the only such institution, so far as we can learn, in the United States. We have had seven inmates so far, the last two having been taken out of the poor houses.

Our only object in seeking this affiliation with the American Medical Association is to provide for the permanence of our institution and the only conditions that we desire to impose in this transfer will be that the Home shall be located permanently in Baltimore, where it originated, and that our Board shall continue as its local managers. Should you accept our proposal, we promise to redouble our zeal in working for the interests of the home and we expect to continue to raise the amount necessary for its economical maintenance.

Yours respectfully,

MRS. EUGENE F. CORDELL,
President.
MRS. SALVATORE DEMARCO,
MRS. JOHANNES MATTERN,
Secretaries.
MRS. J. F. H. GORSUCH,
MRS. LOUIS A. GRIFFITH,
Vice-Presidents.
DR. EUGENE F. CORDELL,
Treasurer.

Dr. H. D. Arnold, Massachusetts, offered the following amendment:

To amend Rule 1 for the guidance of the Committee on Credentials, as amended June 16, 1913, by the addition of the following clause at the end of the Rule:

"The constituent associations shall designate an alternate for each delegate, who may take the place of the delegate when authorized to do so by said delegate in writing. In the absence of such authority any alternate who has been duly chosen by the constituent association may be seated in place of any delegate who is unable to attend, providing he presents proper authority from the President or Secretary of said Society."

It was moved that this be referred to the Reference Committee on Rules and Order of Business.

Motion seconded and carried.

Dr. Dwight H. Murray, New York, proposed the following amendment to Chapter IX, by adding Section 12, as follows:

"All resolutions passed by the House of Delegates, not referred to a Committee of the House of Delegates during its session, shall go to a Committee composed of the President, the Chairman of the Board of Trustees and the Chairmen of the other four standing committees of the House of Delegates.

"All such resolutions shall be void unless approved by a majority of said Committee."

It was moved that this amendment be referred to the Reference Committee on Amendments to Constitutions and By-Laws.

Motion seconded and carried.

Dr. Dwight H. Murray, New York, moved that the discussion in a committee of the whole of the advisability of amending the By-Laws so as to provide a speaker for the House of Delegates be set down for the special time of 2 o'clock on Wednesday, as recommended by the Judicial Council.

Motion seconded and carried.

Dr. Abraham Jacobi expressed his appreciation of the kindnesses he had received at the hands of the members of the House of Delegates.

Dr. George W. Guthrie, Pennsylvania, proposed that the House of Delegates express its appreciation of the services Dr. Jacobi has rendered to the Association as its President by a rising vote.

A most enthusiastic ovation was given to Dr. Jacobi, which was closed by the members of the House forming in line and personally paying a tribute of respect to him, immediately after the House had adjourned.

Third Meeting—Tuesday Afternoon, June 17

The House of Delegates met at 2 p. m., and was called to order by the President, Dr. John A. Witherspoon, Nashville, Tenn.

In assuming the Chair, President Witherspoon said:

"In presiding over this body, I wish to say that I have not had very much experience in these matters, and I come with two conditions, one of which is great enthusiasm for the best interests of this great organization, and the other is an intense desire to see that everybody has a perfectly fair show. I shall not make a speech, but simply say that any error I may make will be of the head and not of the heart."

Dr. D. Chester Brown, Connecticut, Chairman, made a supplementary report for the Committee on Credentials, and asked that action be deferred on it until the report of the Reference Committee on Rules and Order of Business was presented, which request was granted.

Dr. A. B. Cooke, Tennessee, moved that the report of the Reference Committee on Rules and Order of Business be called at this time.

Motion seconded and carried.

Dr. Theodore B. Appel, Pennsylvania, Chairman, presented the report of the Reference Committee on Rules and Order of Business, as follows:

Report of Committee on Rules and Order of Business

Your Committee on Rules and Order of Business, after consideration of the resolution presented by Dr. H. D. Arnold, amending Standing Rule No. 1, for the Guidance of the Committee on Credentials, recommends the adoption of the following modification of the aforesaid resolution:

Be it resolved, That Rule No. 1, as amended June 16, 1913, be amended by the addition of the following clauses at the end of the rule:

"The Constituent Associations shall designate an alternate for each delegate, who may take the place of the delegate when authorized to do so by said delegate in writing. In the absence of such authority, any alternate who has been duly chosen by the Constituent Association may be seated in place of any delegate who is unable to attend, provided he presents proper official authority from said Association."

John O. Polak,
Hubert A. Royster,
Edgar H. Hines,
M. N. Voldeng,
Theodore B. Appel, Chairman.

Dr. Wendell C. Phillips, New York, moved that the report be adopted.

Motion seconded and carried.

It was then moved that the report of the Committee on Credentials be adopted.

Motion seconded and carried.

The Secretary announced that a quorum was present.

The minutes of the previous meeting were read and approved.

Report of Reference Committee on Medical Education

Dr. Henry L. Elsner, New York, Chairman, presented the Report of the Reference Committee on Medical Education, as follows:

To the House of Delegates of the American Medical Association:

Your Committee, to which was referred the report of the Council on Medical Education, reports as follows:

The faithful and monumental work which has been done by the Council on Medical Education during the period of its existence has exerted an influence which has lifted American medicine to a higher plane than ever before; no single factor has been so potent in improving our methods of education.

Your Committee appreciates and commends the efforts of the Council on Medical Education and would express the gratitude of the entire medical profession.

This report would be incomplete and unjust if it failed to mention the splendid service of the Secretary of the Council on Medical Education, Dr. N. P. Colwell, who has devoted himself untiringly and enthusiastically to the work, which because of his assistance has been eminently constructive.

Since the publication of the standard four-year high-school course fixed as the prerequisite for the work of the proposed preliminary college year, the Council has learned that a slight modification has been found essential. Owing to the fact that in certain sections of the country few high schools give to the same student courses in both Latin and a modern language, to prevent what would be an unnecessary hardship your Committee, at the suggestion of the Council, recommends that the number of required units of high-school work be reduced from nine to seven and that the student be permitted to offer two units of either Latin or French or German among the seven required units.

We are especially encouraged by the earnestness of those in charge of the Southern Medical College, and congratulate them on the success of their recent efforts to advance medical education.

Your Committee believes, after a study of the data offered by the Council, that the decrease in the number of medical colleges is not detrimental and has in no measure lessened the opportunities for the study of medicine.

The medical student is still privileged to enter on the study of medicine at a cost within his means, but in higher-grade colleges.

We note with satisfaction that twelve state licensing boards have taken action adopting one or two years of higher preliminary requirements in advance of a four-year high school course; and that twenty-four state boards have withdrawn recognition from a large number of low-grade medical schools of the Class C type. The support of the state licensing boards is so important to the cause of medical education that we hope and believe that other states will soon take similar action.

The Committee believes that the Council should be encouraged in its preliminary investigation of the hospitals throughout the country, and is already convinced by the data submitted that sufficient opportunities are available to supply internships for all medical graduates. The Committee believes that the voluntary seeking of hospital appointments by the large majority of recent medical graduates is most encouraging and argues in favor of a stronger and a better profession. It further believes that the addition to our present curriculum of a year of such service would not be a hardship to the medical student, but a decided advantage to both the medical profession and to the public.

Your Committee recommends that the House of Delegates request the Council on Medical Education to report at the next annual meeting on the feasibility of requiring for the degree of Doctor of Medicine this additional hospital year of the students entering with the fall of 1915.

There is a growing demand in our country for proficient health officers, and the Committee is convinced that the education of their men deserves this careful consideration of the Council on Medical Education in connection with an added year of preparation, and would suggest that the Council investigate this subject and report at the next annual meeting of the House of Delegates.

It further appears to your Committee that postgraduate courses of study might with profit demand the attention of the Council on Medical Education, and it therefore suggests that a report be submitted to the House of Delegates at its next annual meeting dealing with such instruction.

Respectfully submitted,

Henry L. Elsner, Chairman.
Horace D. Arnold,
Walter A. Jayne,
V. G. Vecki,
A. C. Cotton.

Dr. Wendell C. Phillips, New York, moved that the report be adopted.

Motion seconded and carried.

Report of Committee on National Department of Health

The President called for the Report of the Committee on National Department of Health, Dr. John B. Murphy, Illinois, Chairman.

At the request of the Chairman, a member of the Committee, Dr. William A. Evans, Illinois, read the report, as follows:

Four meetings of the Committee on National Health Organization have been called during the year. At the first of these meetings, called in Chicago, but three members were present. One meeting was held in Washington, in conjunction with representatives of the Committee of One Hundred, American Association for the Advancement of Science; another meeting was held in Philadelphia, in conjunction with the Council on Health and Public Instruction, and a third meeting was held in Washington, in conjunction with the same Council. The Committee has, however, been as active as circumstances would permit in the entire period that has elapsed since the last meeting of the Association.

In no inconsiderable part, through the active efforts of the Committee, or, one might say, of one of the members of the Committee, Dr. Evans, more or less satisfactory "health planks" were inserted in the recent platforms in each of the great political parties, and the planks that were inserted in the platform of the successful party was by far the strongest and most satisfactory of all that have at any time been inserted in any platform.

The efforts of your Committee have been devoted toward two ends: first, the creation of a Committee on Public Health, in the House of Representatives; second, the establishment of a Department of Health.

The establishment of a Committee on Health in the House of Representatives is looked on not only as according due recognition in the national legislature to the most important of all subjects with which any government ever has to deal, but also as being a very important step toward obtaining in the House favorable consideration of legislation looking toward the proper organization of the now scattered and incomplete federal health services. Your Committee had every reason to expect that in the recent organization of the Committees of the House of Representatives, provision would be made for a Committee on Health and regrets to report that no such action was taken.

With the expiration of the Sixty-Second Congress, March 4, last, the bill commonly known as the Owen bill, and officially entitled as reported, "A Bill to Establish an Independent Public Health Service, and for Other Purposes," S. 1, which had been favorably reported by the Senate Committee on Public Health and National Quarantine, died. Taking the advantage of experience in efforts looking toward the enactment of that bill, a new bill had been drafted, and was introduced by Senator Owen into the Sixty-Third Congress, being Senate Bill No. 1, entitled "A Bill to Establish a Department of Health, and for Other Purposes." There has been, of course, no possibility of procuring action on that bill during the current special session.

Representatives of this Committee visited the American Institute of Homeopathy at its Pittsburgh, Pa., meeting and explained to it the movement for a national Department of Health. As soon as this explanation was made, the institute endorsed the measure by formal vote. This convinces the Committee of two truths. First, it is wise for the American Medical Association each year to send representatives to organizations working along lines similar to ours to explain to them all actions of our organization in which they may be interested and to invite similar organizations to send representatives to our meetings for a similar purpose. This conclusion is not within our province, but we offer it to you gratuitously as a suggestion out of last year's conference.

The second conviction is germane. If our homeopathic friends have been misled by representations made to them, it is certain that members of Congress have also been misled. If an explanation of the bill cleared up those misstatements and caused them to indorse a national Department of Health, it seems probable that proper explanations made to misinformed members of Congress would cause them to favor a department, when this bill becomes active in the House or Senate, or both. This Committee strongly advises that suitable representation be maintained at Washington for the purpose of correcting the false statements made by the opposition. We suggest that steps be taken to enter into a working agreement among the organizations interested in human welfare to bear jointly the expense of maintaining this representation. Such organizations as the National Chamber of Commerce, the National Association of Manufacturers, the National Federation of Labor, the National Educational Association, the National Federation of Women's Clubs, the American Association of Life-Insurance Presidents, the National Association of Charities and Correction, the Committee of One Hundred, the American Institute of Homeopathy, the National Eclectic Medical Association and the National Dental Association and all other interested agencies should be invited into this cooperation.

The enactment of this bill represents the objective point toward which all of the energies of the Association should be directed, if the Association is going to live up to the ideals which it has heretofore set. If, however, the Association is going to play an effective part in the enactment of progressive health legislation, it must do something more than "hurrah" during the annual meetings of the Association. The creation of a Committee on National Health Organization, with instructions to do what it can to procure the enactment of legislation designed to increase the efficiency and economy of federal public health administration, and specifically to bring about the coordination and consolidation of existing federal public health services in a department of health is nothing so long as that Committee is not provided with means wherewith to do its work. Yet all efforts to obtain funds wherewith to carry on its work that have been made by the Committee appointed at the last meeting of the Association have failed.

An appeal was made to the Board of Trustees for an appropriation for that purpose, but the Board of Trustees refused to make any such appropriation on the ground, it is stated, that the appropriation should come from the Council on Health and Public Instruction. It is to be noted, however, that on the very day the Board of Trustees refused to make an appropriation for the expenses of the Committee on National Health Organization, the estimates of the Council on Health and Public Instruction were before the Board of Trustees and those estimates included no provision for the expenses of the Committee on National Health Organization. And yet the Board of Trustees when it rejected the estimates of the Committee on National Health Organization, and referred it for funds to the Council on Health and Public Instruction, did not increase the appropriation made for the Council on Health and Public Instruction so as to enable it to make an appropriation for the needs of the Committee.

It should be distinctly understood that if the Committee is to promote actively the reorganization of our federal health service, it will be necessary to have some one who can make it his business to gather the necessary facts in support of such legislation, and to put those facts into the hands of the men who must pass on any measure of this kind before it becomes a law. The arguments that are being advanced against any coordination and consolidation of the various public health services so as to increase their efficiency and economy must be discovered and met in a proper manner. The Association has not the right to ask any one of its members to do this work for the Association at so great a personal sacrifice as would be necessary to make the work effective. Whether one engaged in such work be or be not called a lobbyist, is immaterial. The name has come to have a certain stigma attached to it because of improper methods sometimes used, but if any representative of the Association do this altruistic work in a proper manner, on behalf of the Association, he would be a poor representative, and this would be a poor Association, if it were frightened at the bugaboo of a word.

For several years the public, and particularly the members of the national legislature, have been persistently misinformed about this measure. It has been said that it was a measure concocted by and for the advantage of the American Medical Association and its members, that it was intended as a measure to regulate the practice of medicine, that under it only one school of medicine would be allowed to practice, that it means state medicine, that it would invade homes and destroy individual liberty and would do scores of other wild and impossible things—statements known to the informed to be foolish and awfully foreboding to those obsessed with fear, and creating timidity on the part of those whose minds are engrossed with other things. These falsehoods and misrepresentations have been widely accepted because there was no agency to combat them. Emboldened by the supineness of the American Medical Association, these groups are opposing laws for the public health and the administrative activities of health departments, state and municipal. They are fast demonstrating that they are enemies of the common weal, but there is no agency to combat either their false statements or their pernicious activities against the public health. Unfortunately for the people of this country, a majority of your Board of Trustees has refused to appropriate money to support representatives at Washington to correct these misstatements; where the Board has made appropriation, it has been held up by one member for years opposed to the activity of the Association in this matter.

The maintenance of representation at the seat of government is necessary, if this legislation is to pass. It is the method made use of by the national association for labor legislation in passing the phosphorus bill and other humanitarian legislation, by the National Federation of Labor and by commercial, philanthropic and sociologic organizations in securing legislation universally considered to be right and proper.

In so far as relates to the relation that exists or should exist between this Committee and the Council on Health and Public Instruction, your Committee begs to call your attention to the fact that the work of the Council on Health and Public Instruction has been understood to be the study of existing legislation in a critical way, so as to enable the Council to advise those who are in search of certain information as to what legislation has been enacted and with what results and as to what legislation the Council would recommend elsewhere. It has never been understood to be the function of the Council on Health and Public Instruction to do anything more than this (whatsoever) to promote the enactment of legislation and, so far as is known, the Council has never taken any such action. This Committee, on the other hand, was definitely created, it is understood, for the purpose of promoting legislation toward the accomplishment of a particular end: and to make the Committee an adjunct to the Council on Health and Public Instruction, as the Board of Trustees has undertaken to do, is to confuse the purposes for which the two bodies were created.

The undersigned deemed it a mistake to have had the trustees place this matter in the hands of the present Council on Health and Public Instruction and to have placed this Committee under their leadership.

We will assume that these gentlemen are honest to their convictions. They are men of the highest character and the loftiest motives. They are so profoundly impressed with the justice of their cause that they cannot understand why it needs to be explained to or argued with members of Congress according to the prevailing custom.

Great principles are established, great fights are won by earnest men intent on victory and refusing to be put aside. With profound respect for these gentlemen, they have not brought to this project any such qualities. They have always seemed timid, able to discover defect, able to see obstacles, conservative, judicial, careful of every interest whose rights might be thought to be invaded. They have shown themselves entirely without the capacity for aggressive leadership necessary to win this fight.

We, the undersigned, cannot see any virtue in pretending to be for a Department of Health directly and then covertly attempting to get it by an expansion of the great Public Health Service. It is the judgment of the undersigned that the American Medical Association should either discontinue the Committee or else give it funds, and the freedom to develop its own leadership.

It is the judgment of the undersigned that, pursuing the plan followed for several years past, there will never be a national Department of Health. The fault lies not with the House of Delegates. They have always endorsed it unanimously. The fault lies in trying to accomplish an end with machinery unsuited to the purpose, and manned by men out of sympathy with the proved and accepted methods for getting results with legislative bodies.

We, the undersigned, recommend that the American Medical Association either withdraw its support from the bill for a national Department of Health, or that it compel greater activity by its agents.

The present type of activity is a hindrance to the bill, a harm to the health cause, and detrimental to the medical profession.

For reasons stated, it is recommended that the House of Delegates definitely determine the status of this Committee and instruct the Board of Trustees and the Council on Health and Public Instruction accordingly. The Committee recommends that the House of Delegates again declare its adherence to the movements now under way looking toward the consolidation and coordination of our federal Public Health Service into a Department of Health; that it instruct the President, the Secretary, the Treasurer, the Manager and Editor, and all other officers of the Association, the Board of Trustees, and all Councils and Committees of the Association, to do whatever may lie within their power and within the power of each of them looking toward the enactment of legislation toward the end named; and that the Committee on National Health Organization be continued.

J. B. MURPHY,
J. N. HURTY,
W. C. WOODWARD,
W. A. EVANS.

Dr. George H. Kress, California, moved that the report be referred to the Reference Committee on Legislation and Political Action.

Motion seconded and carried.

Report of Reference Committee on Reports of Officers

Dr. Donald Campbell, Montana, presented the report of the Reference Committee on Reports of Officers, as follows:

We, the Committee, beg leave to present to the House of Delegates the following recommendations:

PRESIDENT'S REPORT

The first recommendation in the President's report is that the Secretary of Sections be elected for a term longer than one year, and that the continuance in office of such secretaries for long periods of time will add to the value of the sections and the importance of the Association. No change in the By-Laws is necessary to accomplish this desirable end.

Section 2, Chapter XI, of the present By-Laws, provides that all section officers are elected for one year. Each section may elect its secretary to serve a longer time at its discretion. This reference is very timely and we note that the trustees in their report made the same suggestion. We recommend that the House of Delegates place itself on record as being in favor of the election of secretaries of sections for a longer term than one year, and that the Secretary of the Association be requested to notify the several sections that the House of Delegates recommends to the several sections that the Secretary of the Sections be elected for a term of not less than three years.

And, further, to carry this into effect, in the first five sections, those on the Practice of Medicine; Surgery; Obstetrics, Gynecology and Abdominal Surgery; Ophthalmology, and Laryngology, Otology and Rhinology, the Secretary shall be elected for a term of three years at the annual election. The next five sections, on Diseases of Children; Pharmacology and Therapeutics; Pathology and Physiology; Stomatology, and Nervous and Mental Diseases, should be asked to elect their secretaries this year for a term of two years and thereafter for a term of three years, and the last five sections, on Dermatology; Preventive Medicine and Public Health; Genito-Urinary Diseases; Hospitals and Orthopedic Surgery, to elect their secretaries this year for one year and thereafter for a term of three years.

The desirability of ample time for discussion of the many important measures brought before the House of Delegates is a strong argument in favor of extra days in which the delegates may meet and also give them more time to attend the scientific sessions. Objections to lengthening the sessions are many, but the Committee would like to suggest that a partial solution of this problem might be to hold evening sessions of the House of Delegates, with the exception of the night when the President's reception is held. This would, of course, interfere with some of the social functions, but while the social functions are most delightful, there is an old saying, "business before pleasure."

The Committee would suggest the trial of this plan before attempting to lengthen the sessions.

In regard to the recommendations that the President should be an ex-officio member of the trustees, standing committees, councils, etc., the Committee suggests that the Secretary of the Association be requested to invite the President to all such meetings.

TRUSTEES' REPORT

The Reference Committee is gratified to report to this House that the Report of the Board of Trustees submitted at this annual session evidences satisfactory conditions of the business activity of this Association.

REPORT OF THE JUDICIAL COUNCIL

We endorse the recommendation of the Judicial Council relative to a speaker of the House of Delegates and are gratified to note that the House of Delegates has already appointed an hour when it will sit as a Committee of the Whole for the discussion of this question.

We recommend that the other delegates express their appreciation of the investigation made by the Judicial Council of the secret division of fees and of contract practice and recommend the adoption of the resolutions proposed by the Judicial Council, namely:

Resolved, That any member of the American Medical Association found guilty of secret fee-splitting or of giving, or receiving commissions, shall cease to be a member of the American Medical Association.

Resolved, That the House of Delegates of the American Medical Association recommends to each constituent body that it endeavor through the action of its various county societies to reform the various abuses of lodge practice in their separate communities in order that the lodges may give an adequate service to its members and an honorable remuneration to the medical men.

The Reference Committee urges the House to bring the work of the Committee on Red Cross Medical Work to the attention of the entire membership of the organization and to urge cooperation of all in this practical method of relieving distress in times of calamities.

Dr. A. B. Cooke, Tennessee, moved that the report be adopted. Motion seconded.

Dr. H. D. Arnold, Massachusetts, moved as an amendment that the report be taken up seriatim.

The amendment was seconded, accepted, and the original motion as amended was carried.

Dr. Campbell read the section relating to the President's report.

Dr. Hubert Work, Colorado, moved as a substitute for that part of the report of the Reference Committee on Reports of Officers relative to providing for the House of Delegates holding its meetings at hours that do not conflict with the time occupied by the scientific program, namely, that the House shall convene on Monday of the week of the annual session, and that the scientific program shall begin on Wednesday instead of Tuesday, and that in order to carry this into effect, Section 1, Chapter V, of the By-Laws, shall be amended by inserting the word "second" before the words "day preceding the opening of," so that the section shall read: "The House of Delegates shall meet annually on the second day preceding the opening of, and at the same place as, the annual session of the Association."

On motion, duly seconded and carried, no action was taken on this section of the report and the proposed substitute was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Seale Harris, Alabama, introduced the following, which, on motion, duly seconded, was referred to the Reference Committee on Constitution and By-Laws:

> *Resolved*, That Section 1, Chapter V, be amended to read that "the House of Delegates shall meet for the transaction of business on the Saturday and Monday preceding the opening of the annual session of the scientific branch of the Association."
>
> A session of the House of Delegates shall also be held on the morning of Thursday of the week of the scientific assembly, at which time officers of the Association shall be elected and the business of the Association completed; provided, however, that at any annual session the House of Delegates, by a two-thirds vote, may direct that the subsequent annual session shall be held at some time and place other than that at which the scientific assembly convenes.

The section relating to the Report of the Secretary was read. It was moved that this section be adopted. Motion seconded and carried. The section pertaining to the Report of the Board of Trustees was read. It was moved that this section be adopted. Motion seconded and carried. The section relating to the report of the Judicial Council was read. It was moved that this section be adopted. Motion seconded.

Dr. Robert M. Funkhouser, Missouri, moved that this Association disapproves of members of the American Medical Association receiving commissions from instrument houses or houses dealing in medical supplies, and any member so receiving rebates or commissions shall be dropped from this Association.

Seconded.

Dr. H. D. Arnold, Massachusetts, moved to amend that this matter be referred to the Reference Committee on Constitution and By-Laws with instructions to report such changes in the Constitution and By-Laws as will make the recommendation effective. The amendment was accepted.

The original motion as amended was put and carried.

The section relating to Red Cross medical work was read.

It was moved that this section be adopted.

Motion seconded and carried.

Dr. D. Chester Brown, Connecticut, Chairman, presented a supplementary report for the Commitee on Credentials in reference to the seating of Dr. A. Augustus O'Neill, Illinois.

Dr. A. M. Harvey, Illinois, stated that Dr. Robison is a regularly elected delegate from Illinois, but at present is in Europe. Dr. O'Neill is a regularly elected alternate at large from the state of Illinois. He, therefore, moved that Dr. O'Neill be seated in the House of Delegates.

Motion seconded.

It was moved that the rules be suspended in order that the House might act on this case.

Motion seconded and carried.

Dr. A. M. Harvey, Illinois, thereupon moved that Dr. O'Neill be seated in the House of Delegates.

Motion seconded and carried.

Dr. E. J. Goodwin, Missouri, Chairman, presented the report of the Reference Committee on Legislation and Political Action. It was moved that the report be recommitted.

Motion seconded and carried.

Report of the Reference Committee on Miscellaneous Business

Dr. C. R. Woodson, Missouri, Chairman, presented the report of the Reference Committee on Miscellaneous Business, as follows:

Your Committee recommends that the Medical Society of the District of Columbia be recognized as the legitimate successor of the Medical Association of the District of Columbia, and as such, entitled to membership and representation in this Association with all the rights and privileges of its other constituent bodies.

Referring to the report of the Committee to Arrange for Clinic Days, your Committee recommends that the resolution and recommendation be referred to the Board of Trustees with instructions, to report at this or the next annual session, as to the advisability of such additional days to the scientific sessions, as will make such clinic practicable, and that the present Committee to Arrange for Clinic Days be continued until the next annual session.

Referring to the report of the Committee on the Mode of Commemorating the Completion of the Panama Canal, your Committee recommends its reference to the Board of Trustees, with approval.

C. R. Woodson, Chairman,
A. T. McCormack,
Louis J. Hirschman.

This report was considered section by section, and then adopted as a whole.

Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws.

On motion duly seconded and carried the report was received. It was then moved and seconded and carried that the report be considered section by section. The report as as follows; the action taken on each section is entered in parentheses immediately after the section acted on:

The Reference Committee on Amendments to the Constitution and By-Laws reports that it recommends the adoption of the substitute for the amendment to Article 3 of the Constitution proposed by the Judicial Council.

> *The membership of this Association* shall consist of (such members of the Constituent Associations and of such medical officers of the Army, of the Navy and of the U. S. Public Health Service, as shall make application in accordance with the By-Laws hereinafter provided) the members in good standing in its constituent state and territorial associations.
>
> There shall be conducted by the American Medical Association a scientific session in which all members of the Association who qualify as hereinafter provided in the By-Laws as Fellows of the American Medical Association shall be privileged to participate.

[Adopted.]

It recommends that the Amendment to Article 10, Section 2, namely, that there be added to the section the words "and the President, Secretary and Editor of The Journal shall be members of the Board of Trustees without the right to vote" be not adopted.

[Concurred in.]

It further recommends the adoption of the By-Laws as proposed in the report of the Judicial Council.

On several motions, duly seconded and carried, each section was adopted after correcting a misprint in Section 4, Chapter I, of the By-Laws as they appear in the report, so that the word "members" was changed to "fellows" in the sentence reading, after correction "These fellows shall not be required to become personal subscribers to The Journal of the American Medical Association."

The Committee recommends that the amendment to the By-Laws, Section 4, Chapter I, proposed by the representative of the District of Columbia, be not adopted.

[Concurred in.]

The Committee reported that the amendment to the By-Laws, proposed by Dr. Dwight H. Murray, relative to the introduction of new business at a time when there is no opportunity for seriously considering the subject presented, was already provided for in the By-Laws.

(Dr. Murray asked permission to withdraw the amendment as he had learned of the provision existing to accomplish the purpose desired subsequent to having offered the amendment. The permission was granted.)

The Committee recommends the adoption of the amendment to Section 12, Chapter XI, of the By-Laws, proposed by the Board of Trustees, namely, that the word "thirty" be substituted for the word "forty." (On motion duly seconded this was carried.)

The Committee further recommends the adoption of the amendment to Section 5, Chapter XI, of the By-Laws, proposed by the Board of Trustees, namely, that the last sentence of this section be changed by inserting in parentheses, after the word "committee," "as constituted at the close of the annual session," and changing "the" to "this." The sentence would then read: "This committee (as constituted at the close of the annual session) shall examine and pass on all papers read before the section, and shall endorse for publication only those that are of scientific or of practical value, and which will reflect credit on the section before which they were read."

(Upon motion duly seconded, this was carried.)

Report of the Reference Committee on Sections and Section Work

Dr. Thomas A. Woodruff, Illinois, Chairman, presented the report of the Reference Committee on Sections and Section Work, as follows:

WHEREAS, A petition signed by 250 prominent members of the American Medical Association, who are also members of the American Gastro-Enterologic Society and of the American Proctologic Society, requests the formation of a new section to be known as "the Section on Gastro-Enterology and Proctology," we recommend the formation of a Section to be entitled the "Gastro-Enterologic and Proctologic Section of the American Medical Association," under the following conditions:

First: That the American Gastro-Enterologic Society and the American Proctologic Society be disbanded and hold their meetings jointly as a Section of the American Medical Association to be designated as above;

Second: We also recommend that the number of papers to be read at any annual session be limited to fifteen.

THOMAS A. WOODRUFF,
WILLIAM LE MOYNE WILLS,
S. W. S. TOMS,
ROCK SLEYSTER.

It was moved that the report be adopted.

Motion seconded and carried.

Dr. Alexander Lambert, Chairman of the Judicial Council, reported that the following letter introduced by title by the President of the Association in his address was referred to the Judicial Council for consideration and report:

MAY 17, 1913.

ABRAHAM JACOBI, *President*,
American Medical Association,

My Dear Doctor:—In 1908 the undersigned were appointed a Committee by the American Institute of Homeopathy to present to the American Medical Association on behalf of the homeopathic profession of the United States a proposition for a *joint* investigation of the scientific merits of the method of drug selection expressed by the formula, *similia similibus curantur.*

The committee has presented the matter to individual members of the House of Delegates, but we believe the matter has never been regularly presented to the House or to the Association itself, as a whole. We request that you bring the matter up for consideration and early action by both. For the following reasons it seems to us a subject worthy of your serious thought.

This rule has governed the selection of drugs in the treatment of disease by a considerable number of medical practitioners for over a century. We feel that the time has come when this formula should be brought before the whole medical profession, carefully investigated by modern scientific methods and a determination of the exact value of this method in the practice of medicine made. We seek this—

First, because the voluntary testimony of a large number of physicians who do not understand the correct application of this method indicates their desire to make use of it.

Secondly, because a large number of men who attempt its use ought to be able to get a better understanding of its true significance.

Thirdly, because we believe a large majority of the medical profession would have their usefulness and their power to benefit the sick largely enhanced by a thorough knowledge of this method.

Fourthly, because we believe that suffering is lessened and sickness more speedily and comfortably terminated through drugs administered according to the rule of similars.

Fifthly, because we feel that a careful investigation of this subject belongs to the whole medical profession and not to any single branch of it. ;

Sixthly, we feel that such research regarding the formula of similars is desirable, because the exactness of modern science with the present means of investigation, together with the accurate observation of the subjective as well as the objective symptoms, make it expedient to investigate the action of many drugs coming into use at the present time, as well as to reexamine those long proved.

The Judicial Council recommends that the House of Delegates direct the Secretary to acknowledge the receipt of the communication of the Committee of the American Institute of Homeopathy, constituted in 1908, and that this Committee be asked to advise this body as to whether or not it is still authorized to act for the American Institute of Homeopathy, and with what power it is vested. Further, if the Committee wishes to renew the request for cooperation in determining proof, the American Medical Association will be pleased to receive a definite scientific proposition submitted over the individual signatures of the committee.

It was moved that the report of the Judicial Council be adopted.

Motion seconded and carried.

Dr. A. M. Corwin, Illinois, offered the following resolution:

WHEREAS, The American Medical Association annually attracts to its session a large number of the profession, including its leading scientific exponents; and

WHEREAS, The total membership of this growing Association is so great that but limited opportunity is afforded for the presentation of valuable papers; and

WHEREAS, Many of our ablest thinkers and workers find it increasingly difficult to obtain places on the scientific program; and

WHEREAS, It is evident from a perusal of the published program of the present meeting that many individuals are scheduled for at least two contributions each, either in the same or in separate sections;

Resolved, That this House of Delegates in the interest of greater fairness and of a wider distribution of the privileges and obligations to all, recommends that no member be allowed to appear for the reading of more than one paper at each session. Be it

Recommended, That Section 13, Chapter XI, of the By-Laws be changed to conform with these resolutions.

It was moved and seconded that the resolution be referred to the Reference Committee on Constitution and By-Laws.

Motion seconded and carried.

Dr. F. C. Warnshuis, Michigan, offered the following resolution:

WHEREAS, The official journals of the various state organizations are largely dependent on their advertising income for the maintenance of their publications; and

WHEREAS, The present tendency of the large business firms and corporations is to discourage the placement of advertising contracts with so-called "class publications"; and

WHEREAS, Several of the independent medical publications have made combinations for the securing of advertising contracts for the individual journal composing these combinations; and

WHEREAS, It is essential that our state journals be assisted in securing these needed advertising contracts, if they are to be expected to attain or maintain a high standard in the field of medical journalism; therefore, be it

Resolved, That the President of the House of Delegates be authorized to appoint a Committee of three members to be known as the Committee on Bureau of State Medical Journals.

Second. That this Committee be authorized to take the necessary steps to form a Bureau of State Journals for the purpose of securing advertising contracts.

Third. That this House of Delegates, through its Secretary and the Committee thus to be appointed, respectfully request the Board of Trustees of the American Medical Association to make such necessary early appropriation of funds for the purpose of financing the preliminary steps requisite for the formation and establishment on a working basis of such a bureau.

On motion of Dr. A. B. Cooke, Tennessee, duly seconded, this was referred to the Reference Committee on Miscellaneous Business.

Dr. Thomas S. Cullen, Maryland, presented the following resolution:

WHEREAS, The American Society for the Control of Cancer, a society composed of representatives of the medical profession and influential laymen, has been recently founded for the purpose of disseminating knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer; to investigate the conditions under which cancer is found, and to compile statistics in regard thereto; therefore, be it

Resolved, That this movement deserves the cooperation of the medical profession of America, and that this Association heartily commends its worthy purpose.

It was moved that the resolution be adopted.

Motion seconded and carried.

Dr. Torald Sollmann, Ohio, Section on Pharmacology and Therapeutics, offered the following resolution:

Dr. A. B. Cooke, Tennessee, moved that the report be adopted. Motion seconded.

Dr. H. D. Arnold, Massachusetts, moved as an amendment that the report be taken up seriatim.

The amendment was seconded, accepted, and the original motion as amended was carried.

Dr. Campbell read the section relating to the President's report.

Dr. Hubert Work, Colorado, moved as a substitute for that part of the report of the Reference Committee on Reports of Officers relative to providing for the House of Delegates holding its meetings at hours that do not conflict with the time occupied by the scientific program, namely, that the House shall convene on Monday of the week of the annual session, and that the scientific program shall begin on Wednesday instead of Tuesday, and that in order to carry this into effect, Section 1, Chapter V, of the By-Laws, shall be amended by inserting the word "second" before the words "day preceding the opening of," so that the section shall read: "The House of Delegates shall meet annually on the second day preceding the opening of, and at the same place as, the annual session of the Association."

On motion, duly seconded and carried, no action was taken on this section of the report and the proposed substitute was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Seale Harris, Alabama, introduced the following, which, on motion, duly seconded, was referred to the Reference Committee on Constitution and By-Laws:

Resolved, That Section 1, Chapter V, be amended to read that "the House of Delegates shall meet for the transaction of business on the Saturday and Monday preceding the opening of the annual session of the scientific branch of the Association."

A session of the House of Delegates shall also be held on the morning of Thursday of the week of the scientific assembly, at which time officers of the Association shall be elected and the business of the Association completed; provided, however, that at any annual session the House of Delegates, by a two-thirds vote, may direct that the subsequent annual session shall be held at some time and place other than that at which the scientific assembly convenes.

The section relating to the Report of the Secretary was read. It was moved that this section be adopted. Motion seconded and carried. The section pertaining to the Report of the Board of Trustees was read. It was moved that this section be adopted. Motion seconded and carried. The section relating to the report of the Judicial Council was read. It was moved that this section be adopted. Motion seconded.

Dr. Robert M. Funkhouser, Missouri, moved that this Association disapproves of members of the American Medical Association receiving commissions from instrument houses or houses dealing in medical supplies, and any member so receiving rebates or commissions shall be dropped from this Association. Seconded.

Dr. H. D. Arnold, Massachusetts, moved to amend that this matter be referred to the Reference Committee on Constitution and By-Laws with instructions to report such changes in the Constitution and By-Laws as will make the recommendation effective. The amendment was accepted.

The original motion as amended was put and carried.

The section relating to Red Cross medical work was read.

It was moved that this section be adopted.

Motion seconded and carried.

Dr. D. Chester Brown, Connecticut, Chairman, presented a supplementary report for the Commitee on Credentials in reference to the seating of Dr. A. Augustus O'Neill, Illinois.

Dr. A. M. Harvey, Illinois, stated that Dr. Robison is a regularly elected delegate from Illinois, but at present is in Europe. Dr. O'Neill is a regularly elected alternate at large from the state of Illinois. He, therefore, moved that Dr. O'Neill be seated in the House of Delegates.

Motion seconded.

It was moved that the rules be suspended in order that the House might act on this case.

Motion seconded and carried.

Dr. A. M. Harvey, Illinois, thereupon moved that Dr. O'Neill be seated in the House of Delegates.

Motion seconded and carried.

Dr. E. J. Goodwin, Missouri, Chairman, presented the report of the Reference Committee on Legislation and Political Action. It was moved that the report be recommitted.

Motion seconded and carried.

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Your Committee recommends that the Medical Society of the District of Columbia be recognized as the legitimate successor of the Medical Association of the District of Columbia, and as such, entitled to membership and representation in this Association with all the rights and privileges of its other constituent bodies.

Referring to the report of the Committee to Arrange for Clinic Days, your Committee recommends that the resolution and recommendation be referred to the Board of Trustees with instructions to report at this or the next annual session, as to the advisability of such additional days to the scientific sessions, as will make such clinic practicable, and that the present Committee to Arrange for Clinic Days be continued until the next annual session.

Referring to the report of the Committee on the Mode of Commemorating the Completion of the Panama Canal, your Committee recommends its reference to the Board of Trustees, with approval.

C. R. Woodson, Chairman,
A. T. McCormack,
Louis J. Hirschman.

This report was considered section by section, and then adopted as a whole.

Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws.

On motion duly seconded and carried the report was received. It was then moved and seconded and carried that the report be considered section by section. The report as as follows; the action taken on each section is entered in parentheses immediately after the section acted on:

The Reference Committee on Amendments to the Constitution and By-Laws reports that it recommends the adoption of the substitute for the amendment to Article 3 of the Constitution proposed by the Judicial Council.

The membership of this Association shall consist of (such members of the Constituent Associations and of such medical officers of the Army, of the Navy and of the U. S. Public Health Service, as shall make application in accordance with the By-Laws hereinafter provided) the members in good standing in its constituent state and territorial associations.

There shall be conducted by the American Medical Association a scientific session in which all members of the Association who qualify as hereinafter provided in the By-Laws as Fellows of the American Medical Association shall be privileged to participate.

[Adopted.]

It recommends that the Amendment to Article 10, Section 2, namely, that there be added to the section the words "and the President, Secretary and Editor of The Journal shall be members of the Board of Trustees without the right to vote" be not adopted.

[Concurred in.]

It further recommends the adoption of the By-Laws as proposed in the report of the Judicial Council.

On several motions, duly seconded and carried, each section was adopted after correcting a misprint in Section 4, Chapter I, of the By-Laws as they appear in the report, so that the word "members" was changed to "fellows" in the sentence reading, after correction "These fellows shall not be required to become personal subscribers to The Journal of the American Medical Association."

The Committee recommends that the amendment to the By-Laws, Section 4, Chapter I, proposed by the representative of the District of Columbia, be not adopted.

[Concurred in.]

The Committee reported that the amendment to the By-Laws, proposed by Dr. Dwight H. Murray, relative to the introduction of new business at a time when there is no opportunity for seriously considering the subject presented, was already provided for in the By-Laws.

On investigation we find that that part of the report stating that "all efforts to obtain funds to carry on its work have failed," is an error.

Investigation proves that $800 was requested by the Secretary of the Special Committee in January, 1913, and that the Council appropriated $1,000 in response to this request. Furthermore, we find that every bill presented by the Special Committee or its members has been paid by the Council. On questioning a member of the Committee present at the request of your Reference Committee, we learned that some members had not been reimbursed for some expenses because the bills had never been presented. We recommend that the Council request these members to present such bills and that they be paid.

That portion of the report which states that the Board of Trustees failed to make any appropriation on the ground that the appropriation should come through the Council having in charge all legislative matters under the By-Laws is correct, and the action of the Trustees is justified and is in accordance with the By-Laws and by the fact that the Board of Trustees did appropriate money to the Council for legislative purposes.

That portion of the report which states that due to the spineness of the American Medical Association the enemies of the National Department of Health are opposing laws for vital statistics and laws and ordinances on public health, and the administration of activities of health departments, state and municipal, and that there is no agency to combat their false statements, is not borne out by the facts because more laws bearing on vital statistics have been passed during the
last six years through the efforts of the American Medical
Association and its Council on Health and Public Instruction
than h[illegible] [illegible]ment and the the preceding twenty-five years.
[illegible] A permanent monu[illegible] of the report which says, "In so far
scription, at or near the that exists, or should exist between
tion of the triumph of A[illegible] the Council on Health and Public
itary science, and that said monument shall include [illegible] attention to
statue of Colonel William C. Gorgas, and recognition in some suitable manner of Laveran, Ross, Finley, Reed, Agramonte, Carroll, Lazear and such others as may have made notable contributions to preventive medicine and sanitary science; and be it further

Resolved, That it is the sense of the House of Delegates that the great work of engineering science should be commemorated in like manner by a companion statue to Colonel George W. Goethals, and this Committee is instructed to communicate this suggestion to the appropriate organization of American engineers and invite their cooperation in a joint movement to this end; and finally, be it

Resolved, That the Committee be instructed to petition the Congress of the United States, in the name of the American Medical Association, for permission to erect said monument or monuments and to provide suitable site or sites therefor.

HOLMAN TAYLOR,
MARVIN L. GRAVES,
ISADORE DYER.

Dr. Thomas S. Cullen, Baltimore, presented the following:

Resolved, That the House of Delegates of the American Medical Association heartily endorses the so-called "*Printer's Ink* bill," is gratified that it has become a law in several states, and hopes that in the near future it may become effective in every state of the Union.

The *Printer's Ink* bill is as follows:

> Any person, firm, corporation or association, who, with intent to sell or in any wise dispose of merchandise, securities, service, or anything offered by such person, firm, corporation or association, directly or indirectly, to the public for sale or distribution, or with intent to increase the consumption thereof or to induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto, or an interest therein, makes, publishes, disseminates, circulates or places before the public, or causes, directly or indirectly, to be made, published, disseminated, circulated or placed before the public in this state, in a newspaper or other publication, or in the form of a book, notice, hand-bill, poster, bill, circular, pamphlet or letter, or in any other way, an advertisement of any sort regarding merchandise, securities, service or anything so offered to the public, which advertisement contains any assertion, representation or statement of fact, which is untrue, deceptive or misleading shall be guilty of a misdemeanor.

It was moved that the resolution be adopted.

Motion seconded and carried.

project any such qualities. They have always seemed timid, able to discover defects, able to see obstacles, conservative, judicial, careful of every interest whose rights might be thought to be invaded. They have shown themselves entirely without the capacity for aggressive leadership necessary to win this fight," we call to your attention and wish to congratulate the Association on having a Board of Trustees possessing the great qualities of mind and heart referred to in this paragraph while sympathizing with them in their apparent lack of capacity for aggressive leadership notwithstanding the possession of so many other commendable attributes.

Referring to that portion of the report which reads, "It is the judgment of the undersigned that the American Medical Association should either discontinue the Committee or else give it funds and the freedom of developing its own leadership," we most heartily concur with that portion of the recommendation which advises the discontinuance of the Committee.

We recommend that when a Committee on Health has been established in the House of Representatives, the Council appoint, by virtue of its authority, and in consultation with the President, such committee or committees as it may deem advisable to further the interests of national health legislation with the ultimate object of the establishment of a department of health.

Your Committee desires to call the attention of the House to the fact that the statement presented by Dr. Evans and referred to the Reference Committee on Legislation and Political Action is signed by the following members of the Committee: J. B. Murphy (by W. A. E.), J. N. Hurty, W. C. Woodward (by W. A. E.) and W. A. Evans, *a minority* of the Committee; the other members of the Committee are Hermann M. Biggs, H. P. Walcott, J. N. McCormack, S. G. Dixon and William H. Welch. Furthermore, the members who signed the report are referred to throughout as the "undersigned" and not as the Committee.

Your Reference Committee feels that this statement of a
[illegible] of the Committee is an unjust and unmerited reflec-
liam Allen Pusey, Chicago [illegible] the Council on Health and
Grant, Denver; Dr. Frank C. Lutz, St. [illegible]ould hardly expect
ling, Shreveport, La, and to fill the term made [illegible] handling
death of Dr. Daugherty, Dr. Thomas McDavitt, St. Paul, M[illegible].

The president then nominated and the House confirmed the following: Member of Judicial Council, Dr. A. B. Cooke, Nashville, Tenn.; Member of Council on Health and Public Instruction, Dr. W. S. Rankin, Raleigh, N. C.; Member of the Council on Medical Education, Dr. H. D. Arnold, Boston.

The Secretary presented a list of names for associate membership endorsed by the officers of various sections, and on motion, duly seconded and carried, the Secretary was instructed to cast the ballot of the House in each case in which the applicant is eligible for associate membership in the Association, namely, when the applicant is not eligible to membership in his constituent state association.

Dr. Thomas S. Cullen, Maryland, rose to a question of personal privilege and asked unanimous consent to permit the introduction of a motion according the floor to Mr. Samuel Hopkins Adams. Consent having been given, the motion was made, seconded and carried.

Mr. Adams then addressed the House on the subject of medical advertisements in the public press.

Supplementary Report of the Board of Trustees

Dr. W. W. Grant, Colorado, Chairman, presented a supplementary report for the Board of Trustees. The Board of Trustees desired to call the attention of the House of Delegates to the fact that the Reference Committee has made no report regarding the subject of creating new sections. The Board would be glad to have the House take some action in regard to it.

With reference to the request from the Home for Widows and Orphans, which was referred to it, the Board thinks that this should go properly to the Judicial Council and recommends such reference.

In regard to the Bureau of Advertising, no report has been made to the Board of Trustees. It is recommended that the Board be authorized at its discretion to undertake the establishment of a Bureau in line with the resolution introduced and referred to the Reference Committee on Miscellaneous Business.

As to the report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal, and the resolution introduced by Dr. Holman Taylor, Texas, the Board votes to refer these to the House and suggests that the House recommend that the Board, at its discretion, shall make an appropriation for certain preliminary work to this end.

Dr. J. W. [illegible], Minnesota, moved that the report of the Board of Trustees be adopted.

Motion seconded and carried.

The President announced the appointment of the following officers of the new Section on Gastro-Enterology and Proctology, should this section be established in accordance with the conditions imposed: Chairman, Dr. Joseph M. Mathews, Louisville, Ky.; Vice-Chairman, Dr. J. A. McMillan, Detroit; Secretary, Dr. A. J. Zobel, San Francisco; Executive Committee: Dr. Dwight H. Murray, Syracuse, N. Y.; Dr. John L. Jelks, Memphis, Tenn., and Dr. L. J. Hirschman, Detroit.

It was moved that these appointments be ratified.

Motion seconded and carried.

Dr. Arthur T. McCormack, Kentucky, asked unanimous consent, which was granted, to introduce the following resolution:

Whereas, the Minneapolis *Journal*, published in Minneapolis, not only closes its advertising columns to all forms of quackery, but also conducts an active campaign against such advertising carried by many of its contemporaries, be it

Resolved, That the American Medical Association deems it peculiarly appropriate at this meeting to endorse the standards maintained by the Minneapolis *Journal* in the matter of medical advertisements, and to congratulate the legitimate advertisers and the public of this community on the proof thus afforded that a newspaper can be successful without the support of the Great American Fraud.

It was moved that the resolution be adopted.

Motion seconded and carried.

Medical Association of Porto Rico

Dr. Alexander Lambert, New York, Chairman, made a supplementary report for the Judicial Council. The Judicial Council has considered the petition of the Medical Association of Porto Rico praying that it be accepted as and constituted a constituent association of the American Medical Association. The Judicial Council recommends that the Medical Association of Porto Rico be recognized as a constituent association of this Association.

Dr. Arthur T. McCormack, Kentucky, moved that the report be adopted.

Motion seconded and carried.

Supplementary Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Floyd M. Crandall, New York, Chairman, presented the following report of the Reference Committee on Amendments to the Constitution and By-Laws:

The Committee recommends that the Secretary be directed to have the Public Health Service designated by this title wherever the name occurs in the Constitution and By-Laws, that the Secretary be further directed to rearrange the chapters and sections of the By-Laws, renumbering them whenever necessary so that the sections relating to definite subjects may be grouped, and offers the following amendment to the Constitution to be voted on next year, namely; that in Article 3 of the Constitution, second paragraph, the words "scientific assembly" be substituted for "scientific session."

Floyd M. Crandall,
Edwin Walker,
Ben R. McClellan,

Dr. Wendell C. Phillips, New York, moved the adoption of the report.

Motion seconded and carried.

Dr. C. R. Woodson, Missouri, Chairman, presented a supplementary report of the Reference Committee on Miscellaneous Business, as follows:

With regard to the preamble and resolution introduced by [illegible] C. Warnshuis, Michigan, the majority of the committee recommends the adoption of this report, but the Chairman of the Committee does not concur in this recommendation.

Concerning the preamble and resolution referred to this Committee, which was introduced by Dr. Torald Sollmann, Section on Pharmacology and Therapeutics, the Committee unanimously recommends the adoption of this preamble and resolution.

C. R. Woodson,
A. T. McCormack,
Kenneth A. J. McKenzie,
John Z. Shedd,
Louis J. Hirschmann.

On separate motions, duly seconded and carried, each section of the report was adopted.

Report of the Committee on Awards

The report of the Committee on Awards was then presented, and on motion, duly seconded and carried, the report was adopted.

The report is as follows:

In view of the general excellence of all the exhibits, your Committee found great difficulty in deciding as to their relative merits. It wishes to recommend highly the exhibits as a whole and the very effective manner in which the demonstrations were made.

The Committee has awarded the gold medal to Dr. C. C. Bass of Tulane University for the exhibit of the "Cultivation of Malarial Plasmodia in Vitro."

As exhibits to be distinguished by certificates of merit, the Committee recommends the following:

"Cancer in Plants," Erwin F. Smith, United States Bureau of Plant Industry.

"Intestinal Parasitic Diseases," Lillian H. South, Kentucky State Board of Health.

"Histology of Goiter," L. B. Wilson, Mayo Clinic.

"Studies in the Physiology of Anesthesia," W. D. Gatch, Frank Mann and Dowell Gann, Indianapolis.

"Exhibit of Fetal Peritoneal Folds by Means of Specimen Photographs and Drawings," Joseph Rilus Eastman, Indiana University School of Medicine, Indianapolis.

"Blood-Vessel Suturing and Transplantation of Blood-Vessels and Intestines," J. S. Horsley, St. Elizabeth Hospital, Richmond, Va.

"Roentgen-Ray Plates of Lesions of Various Internal Viscera," D. H. Carman, Mayo Clinic.

Signed by order of the Committee:

W. T. Councilman, Chairman.

Report of Committee on Transportation and Place of Session

Dr. J. R. Pennington, Illinois, Chairman, presented the report of the Committee on Transportation and Place of Session, as follows:

Your Committee on Transportation and Place of Session has received invitations to hold the next annual session of the American Medical Association from the following cities, which your Committee reports alphabetically: Atlanta, Atlantic City, Chicago, Louisville, New Orleans, New York and Washington, D. C.

The Committee has given careful consideration to each of these and reports that it recommends to the House of Delegates that the next annual session be held in Atlantic City.

J. Rawson Pennington, Chairman,
W. T. Sarles,
George D. Head,
Thomas Coleman,
Alfred J. Zobel.

Dr. A. T. McCormack asked the unanimous consent that he might introduce a motion to accord the privileges of the floor to Dr. Curran Pope, Kentucky, who is authorized to present in person an invitation to the House of Delegates, asking the Association to meet next year in Louisville, Ky.

Consent having been given, a motion was introduced, seconded and carried.

Dr. Pope then invited the Association to come to Louisville for its next meeting.

Dr. A. T. McCormack, Kentucky, moved that the report be amended by substituting Louisville for Atlantic City.

Motion seconded.

Dr. G. Wythe Cook, District of Columbia, rose to a question of personal privilege and stated that he desired to have the House consider the District of Columbia's appeal that the Association meet next year in Washington.

Dr. George W. Guthrie, Pennsylvania, moved as a substitute that Atlantic City, Louisville and Washington, D. C., be placed in nomination and the House proceed to a ballot to determine the place of the next annual session.

Motion seconded and carried.

A ballot was then taken and Atlantic City was selected.

Dr. A. L. Brittin, Illinois, asked unanimous consent, which was given, to introduce the following resolution:

Resolved, That the American Medical Association now in convention assembled offers through its House of Delegates a vote of its most sincere thanks to the medical profession of the state of Minnesota, and to the residents of these beautiful Twin Cities, Minneapolis and St. Paul, for the courteous and generous entertainment and hospitality during the period of this meeting.

Motion seconded and unanimously carried.

As there was no further business to come before the meeting, on motion of Dr. Perry H. Bromberg, Tennessee, seconded by Dr. Thomas S. Cullen, Maryland, the House adjourned *sine die*.

Members of House of Delegates in Attendance

[The figures indicate the number of delegates to which the state is entitled.]

ALABAMA—3
Seale Harris................Mobile
H. T. Inge..................Mobile

ARIZONA—1
John E. Bacon.............Miami

ARKANSAS—2
Morgan Smith..........Little Rock
William V. Laws......Hot Springs

CALIFORNIA—3
George H. Kress......Los Angeles
George Hare................Fresno
V. G. Vecki.........San Francisco

COLORADO—2
Hubert Work...............Pueblo
W. A. Wayne...............Denver

CONNECTICUT—2
E. J. McKnight..........Hartford
D. Chester Brown.........Danbury

DELAWARE—1

DISTRICT OF COLUMBIA—1
G. Wythe Cook.......Washington

FLORIDA—1

GEORGIA—3

HAWAII—1

IDAHO—1
J. N. Alley..........Fort Lapwai

ILLINOIS—9
A. L. Brittin.................Athens
A. C. Cotton..... ....Chicago
K. A. Zurawski............Chicago
A. Augustus O'Neill......Chicago
R. J. Coultas.... .. ..Mattoon
E. W. Fiegenbaum. .Edwardsville
A. M. Harvey..............Chicago
A. M. Corwin ....Chicago
J. A. Koch.................Quincy

INDIANA—4
J. Rilus Eastman......Indianapolis
Edwin Walker............Evansville
F. B. Wynn...........Indianapolis
James M. Dinnen.... .Fort Wayne

IOWA—3
L. W. Littig............Davenport
M. N. Voldeng...........Cherokee
J. C. Rockafellow......Des Moines

ISTHMIAN CANAL ZONE—1

KANSAS—2
J. T. Axtell................Newton
George M. Gray......Kansas City

KENTUCKY—4
J. A. Stucky............Lexington
Carl Lewis Wheeler....Lexington
V. E. Simpson...........Louisville
A. T. McCormack..Bowling Green

LOUISIANA—2
Oscar Dowling..........Shreveport

MAINE—1
E. H. Bennett...............Lubec

MARYLAND—2
Randolph Winslow......Baltimore

MASSACHUSETTS—5
H. D. Arnold................Boston
H. G. Stetson............Greenfield
H. W. Van Allen.......Springfield
Hugh Cabot.................Boston
H. E. Sears................Beverly

MICHIGAN—4
E. T. Abrams..........Dollar Bay
F. C. Warnshuis....Grand Rapids
Louis J. Hirschman........Detroit
C. E. Boys..............Kalamazoo

MINNESOTA—2
J. W. Andrews............Mankato
Thomas McDavitt.........St. Paul

MISSISSIPPI—2
W. S. Leathers..........University

MISSOURI—5
C. R. Woodson.........St. Joseph
A. W. McAlester, Jr..Kansas City
H. L. Reid..............Charleston
Reuben M. Funkhouser..St. Louis
E. J. Goodwin............St. Louis

MONTANA—1
Donald Campbell............Butte

NEBRASKA—2
A. D. Nesbit..............Tekamah
A. R. Mitchell.............Lincoln

NEVADA—1
Benjamin F. Cunningham....Reno

NEW HAMPSHIRE—1
John Z. Shedd......North Conway

NEW JERSEY—3
C. R. P. Fisher......Bound Brook
Geo. T. Welch..............Passaic
William S. Lalor..........Trenton

NEW MEXICO—1
S. D. Swope...............Deming

NEW YORK—11
Wendell C. Phillips.New York City
William D. Johnson.......Batavia
Grant C. Madill.......Ogdensburg
Dwight H. Murray......Syracuse
Henry D. Furniss..New York City
Henry L. Elsner..........Syracuse
Floyd M. Crandall......New York
Edgar A. Vander Veer.....Albany
John C. MacEvitt........Brooklyn
S. W. S. Toms..............Nyack
John O. Polak............Brooklyn

NORTH CAROLINA—2
H. A. Royster.............Raleigh

NORTH DAKOTA—1
James Grassick.......Grand Forks

OHIO—6
W. J. Means.............Columbus
E. O. Smith............Cincinnati
H. C. Haning...............Dayton
Ben R. McClellan...........Xenia
J. H. J. Upham.........Columbus

OKLAHOMA—2
E. S. Lain.........Oklahoma City
J. H. White............Muskogee

OREGON—1
K. A. J. MacKenzie......Portland

PENNSYLVANIA—9
George W. Guthrie...Wilkes-Barre
Theodore B. Appel.......Lancaster
L. M. Gates..............Scranton
A. W. Baugh.................Paoli
Jno. Foster............New Castle
W. Rowland Davies......Scranton
William T. Hamilton.Philadelphia

PHILIPPINE ISLANDS—1

RHODE ISLAND—1
D. L. Richardson......Providence

SOUTH CAROLINA—1
Edgar A. Hines...........Seneca

SOUTH DAKOTA—1
W. R. Ball................Mitchell

TENNESSEE—2
A. B. Cooke.............Nashville
Perry Bromberg..........Nashville

TEXAS—5
W. B. Russ...........San Antonio
Holman Taylor........Fort Worth
Joe Becton..............Greenville

UTAH—1
W. Brown Ewing..Salt Lake City

VERMONT—1

VIRGINIA—3
J. Shelton Horsley......Richmond

WASHINGTON—2
P. B. Swearingen..........Tacoma

WEST VIRGINIA—1
P. A. Haley...........Charleston

WISCONSIN—3
J. F. Pember...........Janesville
J. J. McGovern.........Milwaukee
Rock Sleyster..............Waupun

WYOMING—1
M. A. Newell............Sheridan

Delegates from the Sections

PRACTICE OF MEDICINE
Joseph A. Capps..........Chicago

SURGERY
W. LeMoyne Wills............
..............Los Angeles, Cal.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
Thomas S. Cullen...Baltimore, Md.

OPHTHALMOLOGY
Thomas A. Woodruff......Chicago

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
....

DISEASES OF CHILDREN
....

PHARMACOLOGY AND THERAPEUTICS
Torald Sollmann........Cleveland

PATHOLOGY AND PHYSIOLOGY
J. W. Vaughan............Detroit

STOMATOLOGY
G. V. I. Brown...Milwaukee, Wis.

NERVOUS AND MENTAL DISEASES
George W. Robinson...Kansas City

DERMATOLOGY
....

PREVENTIVE MEDICINE AND PUBLIC HEALTH
M. P. Ravenel......Madison, Wis.

GENITO-URINARY DISEASES
Bransford Lewis.........St. Louis

HOSPITALS
Joseph Howland............Boston

ORTHOPEDIC SURGERY
....

Delegates from Government Services

George H. Torney............
...........United States Army
Charles F. Stokes............
............United States Navy
John W. Kerr................
....U. S. Pub. Health Service

The Sections at Minneapolis

SECTION ON PRACTICE OF MEDICINE

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order by the Chairman, W. Jarvis Barlow, Los Angeles. The Chairman welcomed the members of the Section, and expressed high appreciation of the honor conferred on him by his selection as Chairman of the Section.

Dr. Leonard W. Ely, Denver, read a paper on "Chronic Arthritis." Discussed by Drs. Richard C. Cabot, Boston; Van G. Yeager, Hayward, Wis.; Joseph L. Miller, Chicago; Collins Johnson, Grand Rapids, Mich., and Leonard W. Ely, Denver.

Dr. Thomas McCrae, Philadelphia, read a paper on "Remote Effects of Lesions of the Prostate and Deep Urethra." Discussed by Drs. Hugh H. Young, Baltimore; W. O. Bridges, Omaha; J. M. Anders, Philadelphia, and Walter Bierring, Des Moines, Iowa.

Drs. Nathaniel Allison and Barney Brooks, St. Louis, read a paper entitled "An Experimental Study of the Mobilization of Ankylosed Joints." Discussed by Drs. D. D. Lewis, Chicago; J. H. Rishmiller, Minneapolis, and B. Brooks, St. Louis.

Dr. Bertram M. Bernheim, Baltimore, read a paper on "Therapeutic Possibilities of Transfusion."

Dr. J. J. Hogan, San Francisco, read a paper on "Theory and Practice of Transfusion."

These two papers were discussed by Drs. A. R. Kimpton, Boston; T. Sollmann, Cleveland; H. M. Sloan, Cleveland; C. Vaughan, Jr., Detroit; B. M. Bernheim, Baltimore, and J. Hogan, San Francisco.

The following resolution, introduced by Dr. J. F. Percy, Galesburg, Ill., was adopted:

Resolved, That this section strongly endorses the action taken by the House of Delegates on the education of the public and the profession looking toward the control of cancer.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

Tuesday, June 17—Afternoon

The Section was called to order by the Chairman, Dr. F. F. Simpson, Pittsburgh, Pa.

Dr. E. E. Montgomery, Philadelphia, occupied the Chair during the reading of the Chairman's address on "Right-Sided Hypertension with Occasional Cardiac Dilatation as Postoperative Complications."

Dr. George W. Crile, Cleveland, read a paper on "Some Newer Methods of Reducing the Mortality of Operations on the Pelvic Organs." Lantern-slides were shown in connection with the paper. Discussed by Drs. Henry O. Marcy, Boston; C. O. Thienhaus, Milwaukee, Wis.; A. E. Hertzler, Kansas City, Mo.; George Gellhorn, St. Louis, and George W. Crile, Cleveland.

Dr. Henry Dawson Furniss, New York, read a paper on "Postoperative Renal Infection." Discussed by Dr. J. W. Draper Maury, New York.

Dr. Richard R. Smith, Grand Rapids, Mich., read a paper on "Final Results of 193 Operations for Ectopic Pregnancy." Discussed by Drs. E. E. Montgomery, Philadelphia; Rufus B. Hall, Cincinnati; Chester M. Echols, Milwaukee, Wis.; John A. Lyons, Chicago; (?) Hall, Kansas City; John Osborn Polak, Brooklyn, and Richard R. Smith, Grand Rapids, Mich.

Dr. J. H. Carstens, Detroit, read a paper on "The Movable Kidney." Discussed by Drs. Rufus B. Hall, Cincinnati; Philemon E. Truesdale, Fall River, Mass.; Henry O. Marcy, Boston; A. Goldspohn, Chicago, and J. H. Carstens, Detroit.

Dr. Edward Reynolds, Boston, read a paper on "Further Points on the Sterility of Women." Discussed by Drs. Robert T. Frank, New York; Laura Branson, Iowa City, Iowa; Charles S. Bacon, Chicago; J. H. Jacobson, Toledo, Ohio, and Edward Reynolds, Boston.

Dr. K. I. Sanes, Pittsburgh, Pa., read a paper on "Membranous Dysmenorrhea." Discussed by Drs. Robert T. Frank, New York; Henry O. Marcy, Boston; George Gellhorn, St. Louis, and K. I. Sanes, Pittsburgh, Pa.

Wednesday, June 18—Morning

Dr. Franklin H. Martin, Chicago, read a paper on "Prolapse of the Uterus: Its Surgical Treatment."

On motion it was resolved that the paper of Dr. Martin and the two succeeding papers be discussed jointly.

Dr. E. E. Montgomery, Philadelphia, read a paper on "Vagino-Uterine Prolapse and Its Effective Treatment."

Dr. George B. Somers, San Francisco, read a paper on "The Anatomy and Surgical Utility of the Sacro-Uterine Ligaments."

These three papers were discussed by Drs. A. E. Benjamin, Minneapolis; William M. Polk, New York; Walter B. Dorsett, St. Louis; J. Riddle Goffe, New York; Robert Earle, St. Paul; A. Goldspohn, Chicago; George Gellhorn, Chicago; G. Betton Massey, Philadelphia; Franklin H. Martin, Chicago; E. E. Montgomery, Philadelphia, and George B. Somers, San Francisco.

Dr. John Osborn Polak, Brooklyn, read a paper on "A study of the End-Results of the Webster-Baldy Operation." Discussed by Drs. Edward Reynolds, Boston; R. S. Yarros, Chicago; C. W. Barrett, Chicago, and John Osborn Polak, Brooklyn.

Dr. Philemon E. Truesdale, Fall River, Mass., read a paper on "Tuberculous Salpingitis." Discussed by Drs. D. C. Balfour, Rochester, Minn.; Curtis S. Foster, Pittsburgh, Pa.; J. H. Carstens, Detroit; John B. Murphy, Chicago, and Philemon E. Truesdale, Fall River, Mass.

Dr. John B. Murphy, Chicago, spoke on "Infections in the Pelvis from a General Surgeon's Point of View." Discussed by Drs. John B. Deaver, Philadelphia, E. Gustav Zinke, Cincinnati, and John B. Murphy, Chicago.

The Executive Committee was announced by the Chairman as follows: Drs. E. E. Montgomery, Philadelphia; Walter B. Dorsett, St. Louis, and C. S. Bacon, Chicago.

Wednesday, June 18—Afternoon

Dr. William J. Mayo, Rochester, Minn., read a paper on "Cancer of the Stomach." Discussed by Dr. William L. Rodman, Philadelphia; John B. Deaver, Philadelphia; John A. Lyons, Chicago, and William J. Mayo, Rochester, Minn.

Dr. Rufus B. Hall, Cincinnati, read a paper on "Cancer of the Uterus: Some Points to Be Emphasized in the Early Diagnosis." This paper was discussed with the two succeeding papers.

Dr. Emil Ries, Chicago, read a paper on "Theoretical and Practical Foundations of a Radical Operation for Carcinoma of the Cervix."

Dr. J. F. Percy, Galesburg, Ill., read a paper on "Heat in the Treatment of Inoperable Cancer of the Vagina and Uterus: Method and Results."

These three papers were discussed by Drs. J. H. Carstens, Detroit; Walter B. Dorsett, St. Louis; C. W. Barrett, Chicago; G. Betton Massey, Philadelphia; William J. Mayo, Rochester, Minn.; John B. Deaver, Philadelphia; C. O. Thienhaus, Milwaukee, Wis.; John A. Lyons, Chicago; Bertha Van Hoosen, Chicago; Henry O. Marcy, Boston; Rufus B. Hall, Cincinnati, and J. F. Percy, Galesburg, Ill.

Dr. J. Shelton Horsley, Richmond, Va., read a paper on "Experimental Transplantation of Intestine After Resection of the Sigmoid, with Special Reference to Resection for Malignant Diseases of the Pelvis." Discussed by Drs. C. E. Ruth, Des Moines, Iowa; A. Goldspohn, Chicago, and J. Shelton Horsley, Richmond, Va.

Thursday, June 19—Morning

The following officers were nominated and elected: Chairman, Dr. E. Gustav Zinke, Cincinnati; Vice-Chairman, Dr. A. E. Benjamin, Minneapolis; Secretary, Dr. Brooke M. Anspach, Philadelphia; Delegate, Dr. R. R. Smith, Grand Rapids, Mich.; Alternate, Dr. John G. Clark, Philadelphia.

Dr. Joseph B. DeLee, Chicago, read the "Report of Committee on the Question: Should the Puerperal Uterus be Emptied of Ovular Remains in the Presence of Infection, and if so, When?" Discussed by Drs. E. E. Montgomery, Philadelphia; J. C. Litzenberg, Minneapolis; Robert T. Frank, New York; R. S. Yarros, Chicago, and Joseph B. DeLee, Chicago.

Dr. George Gellhorn, St. Louis, read a paper on "Local and Spinal Anesthesia in Gynecology and Obstetrics." Discussed by Dr. A. E. Hertzler, Kansas City, Mo.

Dr. W. Wayne Babcock, Philadelphia, spoke on "Spinal Anesthesia in Gynecology, Obstetrics and Abdominal Surgery." Discussed by Dr. Fred J. Taussig, St. Louis.

Dr. J. Riddle Goffe, New York, read a paper on "Biochemical Factors in the Causation of Uterine Hemorrhage."

Dr. John B. Deaver, Philadelphia, read a paper on "Treatment of Hemorrhage from the Non-Pregnant Uterus."

These two papers were discussed by Drs. Lewis L. McMurtry, Louisville, Ky.; J. L. Rothrock, St. Paul; J. Riddle Goffe, New York, and John B. Deaver, Philadelphia.

Dr. R. C. Coffey, Portland, Ore., read a paper on "Intra-Abdominal Adhesions." Discussed by Drs. J. H. Jacobson, Toledo, Ohio; John B. Deaver, Philadelphia; Rufus B. Hall, Cincinnati; Cantrell; Henry Boxer, Birmingham, Ala., and R. C. Coffey, Portland, Ore.

Thursday, June 19—Afternoon

Dr. Fred L. Adair, Minneapolis, read a paper on "Care of the Umbilical Stump: A Bacteriologic Study." Discussed by Drs. Charles S. Bacon, Chicago; N. S. Heaney, Chicago, and Fred L. Adair, Minneapolis.

Dr. Channing W. Barrett, Chicago, read a paper on "The Thyroid Gland and Its Degeneration in Relation to Obstetrics and Gynecology." Discussed by Drs. John N. Bell, Detroit; Mary Strong, Omaha, and Channing W. Barrett, Chicago.

Dr. Henry Schwarz, St. Louis, read a paper on "The Serodiagnosis of Pregnancy and Its Place in Practical Obstetrics." Discussed by Drs. Joseph B. DeLee, Chicago; Losee, Upper Red Hook, N. Y.; Chester M. Echols, Milwaukee, Wis.; N. S. Heaney, Chicago, and Henry Schwarz, St. Louis.

Dr. Charles S. Bacon, Chicago, read a paper on "The Essentials of Sanatorium Treatment of Tuberculous Gravidae and Puerperae and Their Children." Discussed by Drs. Walter J. Marcley, Minneapolis; Mary Strong, Omaha, and Charles S. Bacon, Chicago.

Dr. Alfred Baker Spalding, San Francisco, read a paper on "The Value of Abdominal Measurements in Pregnancy: A Statistical Study." Discussed by Drs. Frederick E. Leavitt, St. Paul; E. Gustav Zinke, Cincinnati, and Alfred Baker Spalding, San Francisco.

Dr. Simpson, the retiring Chairman, made a few remarks in appreciation of the cooperation of the members of the Section and in greeting to his successor, Dr. E. Gustav Zinke, to which Dr. Zinke replied.

On motion of Dr. Channing W. Barrett, Chicago, and Dr. Zinke a rising vote of thanks was given the retiring Chairman, Dr. Simpson, and the Secretary, Dr. Anspach, for their services in making the Section work so eminently successful in the present session.

Dr. Anspach moved a vote of thanks to the University of Minnesota and to the local Committee on Arrangements for all the help given in making the meeting successful.

SECTION ON STOMATOLOGY

Tuesday, June 17—Afternoon

The Section was called to order by Dr. Virgil Loeb, St. Louis, Chairman.

Dr. Loeb appointed Dr. G. V. I. Brown, Milwaukee, Wis., to act as Secretary during the meeting, in the absence of Dr. Eugene S. Talbot.

Dr. Loeb appointed Drs. William C. Fisher, New York, and F. B. Moorehead, Chicago, as members of the Executive Committee.

The following were nominated for associate membership: Drs. George F. Jernigan, New York; Nelson T. Shields, New York; H. R. Raper, Indianapolis; William H. De Ford, Des Moines, Iowa; Daniel Cave, Los Angeles; George D. Graham, Honolulu, Hawaii, Army Dental Corps; A. T. Rasmussen, La Crosse, Wis., and Clarence J. Grieves, Baltimore.

Dr. T. L. Gilmer, Chicago, moved that the above-named men be recommended for membership. Seconded and carried.

Dr. Virgil Loeb, St. Louis, read the Chairman's Address on "Fields for Research in Oral Surgery." Discussed by Drs. F. B. Moorehead, Chicago; T. W. Brophy, Chicago; T. L. Gilmer, Chicago; William C. Fisher, New York; G. V. I. Brown, Milwaukee, Wis.; Nelson T. Shields, New York; C. H. Robinson, Wabasha, Minn.; William H. De Ford, Des Moines, Iowa, and Virgil Loeb, St. Louis.

Dr. E. W. Wooley, Winona, Minn., read a paper on "Social Ethics." No discussion.

The paper of Dr. Eugene S. Talbot, Chicago, on "Interstitial Gingivitis and Pyorrhea Alveolaris," was read by Dr. William C. Fisher, New York. No discussion.

The Chairman appointed the following Nominating Committee: Drs. T. L. Gilmer, Chicago; William H. De Ford, Des Moines, Iowa, and Thomas B. Hartzell, Minneapolis.

Wednesday, June 18—Morning

Dr. H. F. McBeath, Milwaukee, Wis., read a paper on "The Correction of Impediments of Speech in Our Public Schools." Discussed by Mrs. Reid, Detroit, Mich., and Drs. Elmer L. Kenyon, Chicago; Thomas J. Heldt, Columbia, Mo.; T. W. Brophy, Chicago; A. T. Rasmussen, La Crosse, Wis., and H. F. McBeath, Milwaukee, Wis.

Dr. Thomas B. Hartzell, Minneapolis, read a paper on "The Responsibility of the Dentist and Physician in Regard to Mouth Infections and Their Relation to Constitutional Effects." Discussed by Drs. Joseph Head, Philadelphia; T. L. Gilmer, Chicago; F. B. Moorehead, Chicago; Nelson T. Shields, New York; William C. Fisher, New York; C. H. Oakman, Detroit; G. V. I. Brown, Milwaukee, Wis.; T. W. Brophy, Chicago; A. T. Rasmussen, La Crosse, Wis., and Thomas B. Hartzell, Minneapolis.

Dr. William C. Fisher, New York, read a paper on "Bachelor of Medicine: The Need of This New Degree." Discussed by Drs. F. B. Moorehead, Chicago; T. W. Brophy, Chicago, and William C. Fisher.

Wednesday, June 18—Afternoon

Dr. Nelson T. Shields, New York, read a paper on "The Etiology of Trifacial Neuralgia or Tic Douloureux, and Clinical Treatment." Discussed by Drs. G. V. I. Brown, Milwaukee, Wis.; A. H. Levings, Milwaukee, Wis.; T. W. Brophy, Chicago; Joseph Head, Philadelphia; C. H. Oakman, Detroit; F. B. Moorehead, Chicago; Thomas B. Hartzell, Minneapolis; L. W. Dean, Iowa City, Iowa; A. T. Rasmussen, La Crosse, Wis., and Nelson T. Shields, New York.

Dr. L. W. Dean, Iowa City, Iowa, read a paper on "A Method of Closing a Sinus Between the Antrum of Highmore and the Mouth." Discussed by Drs. T. L. Gilmer, Chicago; T. W. Brophy, Chicago; G. V. I. Brown, Milwaukee, Wis.; C. H. Oakman, Detroit, and L. W. Dean, Iowa City.

Dr. F. B. Moorehead, Chicago, read a paper on "Infective Cysts of the Jaws." Discussed by Drs. T. L. Gilmer, Chicago; William C. Fisher, New York; T. W. Brophy, Chicago; Thomas B. Hartzell, Minneapolis, and F. B. Moorehead, Chicago.

The following papers were read as a symposium:

Dr. Joseph Head, Philadelphia: "Treatment of Loose Teeth Due to Inflammatory Degeneration of the Gums and Alveolar Process."

Dr. Claude P. Brown, Philadelphia, Pa.: "Bacteriology of Pyorrhea Alveolaris."

Dr. A. H. Levings, Milwaukee, Wis.: "Bacteria of the Mouth."

These three papers were discussed by Drs. Thomas B. Hartzell, Minneapolies; F. B. Moorehead, Chicago; G. V. I. Brown, Milwaukee, Wis.; T. L. Gilmer, Chicago; C. H. Oakman, Detroit; L. Duncan Bulkley, New York; T. W. Brophy, Chicago; A. Parker Hitchens, Glenolden, Pa.; Nelson P. Shields, New York; William C. Fisher, New York; Joseph Head, Philadelphia, and Claude P. Brown, Philadelphia.

Thursday, June 19—Morning

Report of Nominating Committee made by Dr. T. L. Gilmer, Chicago: Chairman, Dr. William C. Fisher, New York; Vice-Chairman, Dr. F. B. Moorehead, Chicago; Secretary (two years), Dr. Eugene S. Talbot, Chicago; Delegate, Dr. G. V. I. Brown, Milwaukee, Wis.; Executive Committee: Drs. T. L. Gilmer, Chicago; S. L. McCurdy, Pittsburgh, Pa., and Virgil Loeb, St. Louis.

On motion, the Secretary cast the ballot which resulted in the election of the above-named.

Dr. Edward H. Baker, Chicago, read a paper on "The Relation of Mouth Disease to Bodily Health." Discussed by Drs. G. Betton Massey, Philadelphia, and Nelson P. Shields, New York.

The paper of Dr. Vida A. Latham, Chicago, on "The Pathology of Root Findings," was read by Dr. William C. Fisher, New York. Not discussed.

Dr. G. Betton Massey, Philadelphia, read a paper on "Cancer of the Mouth: The Relation of Dental and General Practitioners to Its Early Recognition and Successful Treatment." Discussed by Drs. G. V. I. Brown, Milwaukee, Wis.; Nelson P. Shields, New York; T. W. Brophy, Chicago; O. A. Strauss, Milwaukee, Wis.; C. H. Oakman, Detroit, and G. Betton Massey, Philadelphia.

Dr. G. V. I. Brown, Milwaukee, Wis., read a paper on "The Surgical Treatment of Postoperative Lip and Palate Defects." Discussed by Drs. C. H. Oakman, Detroit; T. W. Brophy, Chicago; O. A. Strauss, Milwaukee, Wis.; R. E. Farr, Minneapolis; A. T. Rasmussen, La Crosse, Wis., and G. V. I. Brown, Milwaukee, Wis.

Moved and seconded that a vote of thanks be extended to the Dental Department for the use of the room and accessories. Carried.

SECTION ON NERVOUS AND MENTAL DISEASES

TUESDAY, JUNE 17—AFTERNOON

The meeting was called to order in Folwell Hall, Room 311, at 2:25 p. m., by the vice-chairman, Dr. W. W. Graves, St. Louis.

Dr. Howell T. Pershing's Chairman's address on "Neurasthenia an Increased Susceptibility to Emotion," was read by Dr. C. Eugene Riggs, St. Paul. Discussed by Drs. A. A. Brill, New York; Joseph M. Aikin, Omaha; L. Harrison Mettler, Chicago; D'Orsay Hecht, Chicago, and Howell T. Pershing, Denver.

Dr. T. D. Crothers, Hartford, Conn., read a paper on "Premonitory Auras in Alcoholic Neuroses." Discussed by Drs. A. A. Brill, New York; Charles R. Ball, St. Paul, and T. D. Crothers, Hartford, Conn.

Dr. D'Orsay Hecht, Chicago, read a paper on "Multiglandular Syndromes and the Nervous System, with Lantern-Slide Demonstration." Discussed by Drs. A. L. Skoog, Kansas City, Mo., and D'Orsay Hecht, Chicago.

Dr. Charles R. Ball, St. Paul, read a paper on "Diagnosis, Prognosis and Treatment of General Paresis." Discussed by Drs. C. Eugene Riggs, St. Paul; S. S. Glasscock, Kansas City, Kan.; Lawrence B. Pillsbury, Lincoln, Neb.; Albert E. Sterne, Indianapolis; A. L. Skoog, Kansas City, Mo.; George A. Moleen, Denver; E. E. Southard, Cambridge, Mass.; W. W. Graves, St. Louis, and Charles R. Ball, St. Paul.

Dr. H. D. Valin, Mankato, Minn., read a paper on "Pathologic Findings in Insanity; Illustrated with Lantern-Slides Showing Gross and Microscopic Lesions." Discussed by Drs. E. E. Southard, Cambridge, Mass., and H. D. Valin, Mankato, Minn.

WEDNESDAY, JUNE 18—MORNING

Dr. S. P. Kramer, Cincinnati, read a paper on "Recent Advances Made in Study of the Circulation of Brain and Spinal Cord." Discussed by Dr. A. L. Skoog, Kansas City, Mo.

Dr. Julius Grinker, Chicago, read a paper on "A Tumor of the Hypophysis in Acromegaly; a Clinical and Post-Mortem Report, with Photomicrographs." No discussion.

Dr. L. Harrison Mettler, Chicago, read a paper on "Symptomatology of Multiple Sclerosis." Discussed by Drs. C. D. Camp, Ann Arbor, Mich.; Julius Grinker, Chicago; D. S. Booth, St. Louis; Charles W. Hitchcock, Detroit, and L. Harrison Mettler, Chicago.

Dr. C. D. Camp, Ann Arbor, Mich., read a paper entitled "Epilepsy and Paresis in Railway Engineers and Firemen." Discussed by Drs. C. Eugene Riggs, St. Paul; C. B. Woodson, St. Joseph, Mo.; D. S. Booth, St. Louis; L. Harrison Mettler, Chicago; W. Brown Ewing, Salt Lake; Sanger Brown, Chicago; Leo M. Crafts, Minneapolis; Lawrence B. Pillsbury, Lincoln, Neb.; Charles Gorst, Mendota, Wis.; Charles W. Hitchcock, Detroit; George A. Moleen, Denver, and C. D. Camp, who, in closing, offered the following resolution which was adopted:

> That the Secretary be asked to communicate to the Council on Health and Public Instruction of the American Medical Association the fact that the Section believes it is highly dangerous that epileptics and paretics be employed in the operation of railroad trains, and that measures should be taken to prevent the employment of such persons.

The Chairman announced the appointment of the following members to act as committee on nominations: Drs. L. Harrison Mettler, Chicago; Charles R. Ball, St. Paul, and Ross Moore, Los Angeles.

WEDNESDAY, JUNE 18—AFTERNOON

Dr. E. M. Hammes, St. Paul, read a paper on "Two Cases of Circulatory Disturbance of the Brain," by Drs. C. Eugene Riggs and E. M. Hammes, St. Paul. Discussed by Drs. Sanger Brown, Chicago; Charles R. Ball, St. Paul; H. E. Conley, Cannon Falls, Minn.; Ross Moore, Los Angeles; C. Eugene Riggs, St. Paul, and E. M. Hammes, St. Paul.

Dr. A. A. Brill, New York, read a paper on "The Conception of Homosexuality: Its Theories, Psychologic Mechanisms and Treatment." Discussed by Drs. D'Orsay Hecht, Chicago; Howell T. Pershing, Denver; Ross Moore, Los Angeles; Albert E. Sterne, Indianapolis, and A. A. Brill, New York.

Dr. W. W. Graves, St. Louis, read a paper on "Can Rabbits be Infected with Syphilis Directly from the Blood of Paretics? Observations on the Recognition of the Virus in the Later Periods of the Disease." Discussed by Drs. Charles R. Ball, St. Paul; Sanger Brown, Chicago, and W. W. Graves, St. Louis.

Dr. Albert E. Sterne, Indianapolis, read a paper on "Exudative Encephalitis." No discussion.

THURSDAY, JUNE 19—MORNING

The following officers were elected: Chairman, W. W. Graves, St. Louis; Vice-Chairman, C. D. Camp, Ann Arbor, Mich.; Secretary (for two years), George A. Moleen, Denver; Delegate, C. Eugene Riggs, St. Paul; Alternate Delegate, E. E. Southard, Cambridge, Mass.

The Executive Committee then consisted of Drs. W. A. Jones, Minneapolis; Edward D. Fisher, New York, and Howell T. Pershing, Denver.

To fill vacancies on the Executive Committee caused by the absence of Drs. Jones and Fisher, the Chairman appointed Drs. C. Eugene Riggs, St. Paul., and E. E. Southard, Cambridge, Mass., to act for the session.

Dr. Ross Moore, Los Angeles, read a paper on "Further Notes on the Preneurasthenic and Preinsane Conditions." Discussed by Drs. C. Eugene Riggs, St. Paul; George H. Moody. San Antonio, Tex.; Philip Zenner, Cincinnati; G. Wilse Robinson, Kansas City, Mo.; L. Harrison Mettler, Chicago; W. W. Graves, St. Louis; Howell T. Pershing, Denver; C. R. Woodson, St. Joseph, Mo., and Ross Moore, Los Angeles.

Dr. Charles H. Frazier, Philadelphia, read a paper on "A Division of the Auditory Nerve for Persistent Tinnitus and Vertigo." No discussion.

Dr. G. Wilse Robinson, Kansas City, Mo., read a paper on "Occlusion of the Posterior Inferior Cerebellar Artery. Report of a Case." No discussion.

Dr. B. W. Sippey, Chicago, read a paper on "Demonstration of Lange's Goldsol Test of the Cerebrospinal Fluid." Discussed by Drs. C. Eugene Riggs, St. Paul; Ross Moore, Los Angeles; Peter Bassoe, Chicago; C. B. Woodson, St. Joseph, Mo.; A. L. Skoog, Kansas City, Mo.; Howell T. Pershing, Denver, and B. W. Sippey, Chicago.

Dr. C. Eugene Riggs, St. Paul, read a paper on "Certain Nervous Phenomena in Pernicious Anemia." Discussed by Drs. George A. Moleen, Denver, and Howell T. Pershing, Denver.

Dr. Ross Moore, Los Angeles, moved that a committee be appointed by the Chairman of the Section on Nervous and Mental Diseases to report in one year as to methods by which the Section may be helpful in the question of the hygiene of childhood with reference to nervous and mental diseases. Motion seconded by Dr. T. D. Crothers, Hartford, Conn. Carried. Whereupon the chair appointed as such committee, Drs. Ross Moore, Los Angeles, and Philip Zenner, Cincinnati.

JOURNALS INDEXED IN THE CURRENT MEDICAL LITERATURE DEPARTMENT
JANUARY-JUNE, 1913

The following journals have been indexed in the Current Literature Department of THE JOURNAL during the past six months. Any foreign journal, except those starred, will be lent by THE JOURNAL to subscribers and members in the United States for a period not exceeding three days. Requests for periodicals should be addressed to the Library of the American Medical Association and six cents in stamps should be enclosed. This covers the average expense of mailing a journal. Domestic journals can be obtained by sending the approximate amount direct to the respective publishers. Thus most of the journals indexed are accessible to the general practitioner, no matter where he may be located.

American Journal of Anatomy. Bi-m. $5. 36th St. and Woodlawn Ave., Philadelphia.
American Journal of Diseases of Children. M. $3. American Medical Association, 535 Dearborn Ave., Chicago.
American Journal of Insanity. Q. $5. Johns Hopkins Press, Baltimore.
American Journal of the Medical Sciences. M. $5. Lea & Febiger, 706 Samson St., Philadelphia.
American Journal of Obstetrics and Diseases of Women and Children. M. $5. Wood & Co., 51 5th Ave., New York City.
American Journal of Orthopedic Surgery. Q. $3. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.
American Journal of Public Health. M. $2. 289 4th Ave., New York City.
Annales de Gynécologie et d'Obstétrique. M. 22 francs. Paris.
*Annales de l'Institut Pasteur. M. 20 francs. Paris.
Annales de Médecine et Chirurgie Infantiles. Semi-m. 12 francs. Paris.
Annals of Ophthalmology. Q. $4. Jones H. Parker, Publisher, Mermod-Jaccard Bldg., St. Louis.
Annals of Surgery. M. $5 J. B. Lippincott Co., 227 S. 6th St., Philadelphia.
Annals of Tropical Medicine and Parasitology. Q. $5. Liverpool.
*Arbeiten aus dem Neurologischen Institut. Irregular. Price varies. Vienna.
*Archiv für Gynäkologie. Irregular. Price varies. Berlin.
*Archiv für Kinderheilkunde. Irregular. 15 marks. Stuttgart.
*Archiv für Klinische Chirurgie. Irregular. Prices varies. Berlin.
Archiv für Verdauungs-Krankheiten. Bi-m. 24 marks. Berlin.
*Archives de Médecine des Enfants. M. 18 francs. Paris.
*Archives des Maladies de l'Appareil Digestif et de la Nutrition. M. 14 francs. Paris.
Archives des Maladies du Cœur, des Vaisseaux et du Sang. M. 17 francs. Paris.
Archives Générales de Chirurgie. M. 26 francs. Paris.
Archives Générales de Médecine. M. 18 francs. Paris.
*Archives Internationales de Chirurgie. Irregular. 30 francs. Ghent.
Archives Mensuelles d'Obstétrique et de Gynécologie. M. 25 francs. Paris.
Archives of Diagnosis. Q. $1. 250 W. 73d St., New York City.
Archives of Internal Medicine. M. $4. American Medical Association, 535 Dearborn Ave., Chicago.
Archives of Ophthalmology. Bi-m. $5. G. P. Putnam's Sons, 27 W. 23d St., New York City.
Archives of Pediatrics. M. $3. E. B. Treat & Co., 241 W. 23d St., New York City.
Australasian Medical Gazette. W. $5. Sydney.
*Beiträge zur Geburtshilfe und Gynaekologie. Irregular. Price varies. Leipsic.
Beiträge zur Klinik der Tuberculose. Irregular. 16 marks. Würzburg.
*Beiträge zur Klinischen Chirurgie. M. Price varies. Tübingen.
Berliner Klinische Wochenschrift. W. 24 marks. Berlin.
Boston Medical and Surgical Journal. W. $5. 101 Tremont St., Boston.
Brain: A Journal of Neurology. Irregular. $4. London.
Brazil Medico. W. 20 milries. Rio de Janeiro.
Bristol Medico-Chirurgical Journal. Bi-m. $3.
British Journal of Children's Diseases. M. $3. London.
British Medical Journal. W. $8.50. London.
Bulletin de l'Académie de Médecine. W. 20 francs. Paris.
Bulletin de la Société de Pédiatrie de Paris. M. 10 francs. Paris.
Bulletin of the American Academy of Medicine. Bi-m. $3. 52 N. 4th St., Easton, Pa.
Bulletin of the Johns Hopkins Hospital. M. $2. Baltimore.
Bulletin of the Lying-In Hospital of the City of New York. Irregular. $1. 23 E. 93d St., New York City.
Bulletin of the Manila Medical Society. M. $1. Manila.
Bulletin of the Medical and Chirurgical Faculty of Maryland. M. $0.25. 121 Cathedral St., Baltimore.
California State Journal of Medicine. M. $1. Butler Bldg., San Francisco.
Canadian Medical Association Journal. M. $5. Toronto.
Centralblatt für die Grenzgebiete der Medizin und Chirurgie. Irregular. 22 marks. Jena.
Cleveland Medical Journal. M. $2. 2318 Prospect Ave., Cleveland.
Clinical Journal. W. $4.25. London.
Colorado Medicine. M. $2. Metropolitan Bldg., Denver.
Correspondenz-Blatt für Schweizer Aerzte. Tri-m. 18 francs per year. Basel.
Delaware State Medical Journal. M. $1. 309 Shipley St., Wilmington, Del.
Deutsche Medizinische Wochenschrift. W. 32 marks. Berlin.
*Deutsche Zeitschrift für Chirurgie. M. Price varies. Leipsic.
*Deutsches Archiv für Klinische Medizin. Irregular. Price varies. Leipsic.
Dublin Journal of Medical Science. M. $5.
Edinburgh Medical Journal. M. $6.
Gazzetta degli Ospedali e delle Cliniche. Tri-w. 25 francs. Milan.
Glasgow Medical Journal. M. $5.
Grèce Médicale. Semi-m. 12 francs. Syra.
Hospitalstidende. W. 2.75 kronen. Copenhagen.
Hygiea. M. $5. Stockholm.
Illinois Medical Journal. M. $2. 522 Capitol Ave., Springfield, Ill.
Indian Medical Gazette. Bi-m. $5. Calcutta.
Jahrbuch für Kinderheilkunde. M. 36 marks. Berlin.
Journal de Chirurgie. M. 44 francs. Paris.
Journal de Médecine de Bordeaux. W. 15 francs.
Journal d'Urologie Médicale et Chirurgicale. M. 40 francs. Paris.
Journal of Abnormal Psychology. Bi-m. $4. R. G. Badger, 194 Boylston St., Boston.
Journal of the American Medical Association. W. $5. 535 Dearborn Ave., Chicago.
Journal of the Arkansas Medical Society. M. $1. 307 Southern Trust Bldg., Little Rock, Ark.
Journal of Biological Chemistry. M. $3. 2427 York Road, Baltimore.
Journal of Cutaneous Diseases. M. $5. Rebman Company, 1123 Broadway, New York City.
Journal of Experimental Medicine. M. $5. Rockefeller Institute for Medical Research, 66th St. and Avenue A, New York City.
Journal of Hygiene. Q. $5.50. London.
Journal of the Indiana State Medical Association. M. $2. 219 W. Wayne St., Fort Wayne, Ind.
Journal of Infectious Diseases. Q. $5. 57th St. and Greenwood Ave., Chicago.
Journal of Iowa State Medical Society. M. $2. Washington, Ia.
Journal of Kansas Medical Society. M. $2. 501 Husted Bldg., Kansas City, Kan.
Journal of Laryngology, Rhinology and Otology. M. $5. London.
Journal of Maine Medical Association. M. $2. Portland, Maine.
Journal of Medical Association of Georgia. M. $1. Harison Bldg., Augusta, Ga.
Journal of Medical Research. M. $4. 240 Longwood Ave., Boston.
Journal of Medical Society of New Jersey. M. $2. 252 Main St., Orange, N. J.
Journal of Michigan State Medical Society. M. $2. 24 W. Main St., Battle Creek, Mich.
Journal of Missouri State Medical Association. M. $2. 3525 Pine St., St. Louis.
Journal of Nervous and Mental Diseases. M. $5. 64 W. 56th St., New York City.
Journal of Obstetrics and Gynecology of the British Empire. M. $6.25. London.
Journal of Oklahoma State Medical Association. M. $1. Muskogee.
Journal of Ophthalmology and Oto-Laryngology. M. $2. 32 N. State St., Chicago.

W.—Weekly; M.—Monthly; Semi-m.—Semimonthly; Bi-m.—Bi-monthly; Q.—Quarterly. *Cannot be loaned.

Journal of Outdoor Life. M. $1. 289 Fourth Ave., New York.
Journal of Pathology and Bacteriology. Q. $5.50. Cambridge, Eng.
Journal of Pharmacology and Experimental Therapeutics. Bi-m. $5. 2427 York Road, Baltimore.
Journal of South Carolina Medical Association. M. $2. Charleston, S. C.
Journal of Tennessee State Medical Association. M. $2. 146 8th Ave., Nashville, Tenn.
Journal of Tropical Medicine and Hygiene. Semi-m. $5. London.
Journal-Lancet. Semi-m. $2. 839 Lumber St., Minneapolis.
Kentucky Medical Journal. Semi-m. $2. Atherton Bldg., Bowling Green, Ky.
Lancet. W. $8. London.
Laryngoscope. M. $3. 3858 Westminster Place, St. Louis.
Lyon Chirurgical. M. 25 francs.
Lyon Médical. W. 20 francs.
Maryland Medical Journal. M. $2. Professional Bldg., Baltimore.
Medical Press and Circular. W. $5. London.
Medical Record. W. $5. W. Wood & Co., 51 5th Ave., New York City.
Medizinische Klinik. W. 32 marks. Berlin.
Military Surgeon. M. $3.50. 716 Union Trust Bldg., Washington, D. C.
Mississippi Medical Monthly. M. $1. 506 First National Bank Bldg., Vicksburg, Miss.
Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie. Irregular. 25 marks. Jena.
*Monatsschrift für Geburtshülfe und Gynäkologie. M. 42 marks. Berlin.
*Monatsschrift für Kinderheilkunde. M. 20 marks. *Leipsic.*
Münchener Medizinische Wochenschrift. W. 32 marks. Munich.
New Mexico Medical Journal. M. $2. P. O. 23, Las Cruces, N. M.
New Orleans Medical and Surgical Journal. M. $2. Tulane Ave. and Liberty St., New Orleans.
New York Medical Journal. W. $5. A. R. Elliott Publishing Co., 66 W. Broadway, New York City.
New York State Journal of Medicine. 17 W. 43d St., New York City.
*Nordiskt Medicinskt Arkiv. Irregular. 30 marks. Stockholm.
Norsk Magazin for Lægevidenskaben. M. $5. Christiania.
Northwest Medicine. M. $2. Cobb Bldg., Seattle, Wash.
Ohio State Medical Journal. M. $2. 186 E. State St., Columbus, Ohio.
Old Dominion Journal of Medicine and Surgery. M. $2. 116 E. Franklin St., Richmond, Va.
Ophthalmic Record. M. $4. 7 W. Madison St., Chicago.
Ophthalmology. Q. $5. 604 Leary Bldg., Seattle, Wash.
Pennsylvania Medical Journal. M. $2. Athens, Pa.
Philippine Journal of Science. Irregular. $7. Manila, P. I.
Policlinico. W. 32 lire. Rome.
Practitioner. M. $6.50. London.
Presse Médicale. Semi-w. 15 francs. Paris.
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EXPLANATION OF THE USE OF THE INDEX

This is an index not only to the reading matter in THE JOURNAL, but also to original articles in the principal medical periodicals of this and other countries. The reading matter appearing in THE JOURNAL is distinguished by the use of black-faced numerals.

The letters used to explain in which department the matter indexed appears are as follows: "E," Editorial; "C," Correspondence; "T," Therapeutics; "Ml," Medicolegal; "P," Propaganda for Reform; "ME," Medical Economics; "ab," abstract; the star (*) indicates an "Original Article" in THE JOURNAL.

This is a subject index and one should, therefore, look for the chief word, with the following exceptions: "Deaths" and "Society Proceedings" are indexed under these titles at the end of the letters "D" and "S." Matter pertaining to the Association is indexed under "American Medical Association."

All matter is indexed under the most important word of the heading used in THE JOURNAL, and also under the subject heading. For instance, abscess of the brain will be found under "abscess," as well as under "brain." Such titles as "ocular manifestations, etc." have been indexed under "Eye." Cross references have been liberally used.

The figures in parentheses refer to the paragraph, the number following to the page in THE JOURNAL, for example:

ABDOMEN, phlegmon, ligneous, of wall of, ***1039**

This reference is to an original article in THE JOURNAL, as shown both by the star and by the black-faced numerals indicating the page.

ACID, tannic, action on urethra, **1656**

This reference, as indicated by the black-faced figures, is also in THE JOURNAL, and on turning to page 1656 we find an answer to a question in the Department of Queries and Minor Notes.

ABDOMEN, acute, in children, treatment, (1) **864**

In this reference, the (1) indicates that the article is in the Current Literature Department and the fact that the page number is in black-faced type shows that the article is abstracted and discussed in THE JOURNAL. Turning to page 864, we find (1) refers to an article by P. L. Mummery in the *British Journal of Children's Diseases*, February.

ABDOMEN, trauma, differential diagnosis in, (81) 1834

The fact that in this last reference the page is given in ordinary type indicates that only the title of the article is given. Turning to page 1834 we find that the numeral (81) refers to a paper on that subject by O. J. Fay which appeared in the *Journal of the Iowa State Medical Society*, May.

In the AUTHOR'S INDEX are the names of the authors of articles which have appeared in THE JOURNAL of the American Medical Association and of articles that have been listed from week to week in the Department of Current Medical Literature as having appeared in other journals. The black-faced numerals indicate that the article is in THE JOURNAL, either in full or in abstract. The star (*) preceding the page number, indicates an original article.

SUBJECT INDEX

A

ABBOTT method for correction of scoliosis, (79) 1671, (102) 1672
  method for scoliosis, necessity for modifying technic, (49) 247, (28) 1191
ABDERHALDEN biologic test for cancer, (52) **1585**, (103) **1842**
  serodiagnosis for dementia praecox, technic of, (63) **949, 1727**
  work of, in organic synthesis, **1464**—E
ABDOMEN, acute, (129) 699, (40) 1400, (2) 1668
  acute in children, diagnosis, (43) 1265 (8) **1836**, (28) 1838
  acute, in children, treatment, (1) **864**
  adhesions and kinks, (52) 1833
  adhesions, developmental, abnormal, (24) 1837, (22) 1983
  aneurysm of, operation by Colt's apparatus, (5) **1836**
  bougie removed from, ten weeks after introduction per vaginam, (3) 306
  calamities, (26) 1920
  cancer, diagnosis of, possible errors in, and plea for exploratory laparotomy, **1574**—ab
  case or two out of ordinary, (9) 158
  contusions of, causing intestinal lesions, (139) 162
  crisis, (59) 160
  diagnosis of surgical conditions, some newer methods, (94) 1397
  drainage, under various conditions of inflammation, (2) 555
  forceps for work on, (161) 162
  foreign bodies in, (12) 322
  foreign bodies in neck or, undiagnosed, operative removal of, (56) 2070
  gunshot wounds of, **237**-ab, (67) 949, ***935** (63) 1493
  hematoma, developing during labor, (111) 1588
  injuries, (29) 1492, (8) 1495
  needles in, complication of hysterectomy, (23) 1033
  omentum for plastic operations in, (96) 559
  pain in infants, (23) **1583**
  pain, recurrent, chronic, diagnosis of causes of, (34) 866
  pendulous, surgical treatment, (37) 1741
  phlegmon, ligneous, of wall of, ***1039, 1318**—C
  Ptosis of: See Splanchnoptosis
  rigidity, (110) 478, (42) 1670
  rigidity under anesthesia, causes and avoidance of, (19) 1264
  solidity and elasticity of, (71) 1193
ABDOMEN, suppurative conditions of upper, (88) 1835
  Surgery: See also Laparotomies
  surgery, advances in, (1) 157
  surgery, diagnostic pitfalls in, (16) 695
  surgery, increase of newer, due to increase in toxic disturbances, **72**—ab
  surgery, oil in, (43) 166
  surgical complications in, during typhoid, (124) 1836
  surgical conditions of, their relation to life expectation, (60) 1262
  surgical conditions of upper right quadrant of, (99) 1029
  surgical diseases, acute, diagnosis and pathology of, (136) **85**
  suturing, improved technic, (120) 1038
  tampon, drainage of, indications for and results, (145) 870
  trauma, differential diagnosis in, (81) 1834
  tumors in children, (126) 952
  tumors of wall, (75) 482
  ulcers excised from anterior wall of, pathologic data from, (30) **1832**
  visual inspection of conditions inside thorax and, (68) **249**
ABELEN'S reaction for salvarsan in urine, **1094**
ABORTION and sterility in relation to ovum, (31) 402
  attempt to induce, in extrauterine pregnancy, (154) 92
  attempt to induce, sudden reflex death, (38) 1984
  case without history, dying declarations made after refusal of physician to treat, **1829**—Ml
  criminal, (53) 404 (76) **1036**
  criminal, admissibility of evidence to prove, **79**-Ml
  criminal, campaign against, (134) 252
  criminal, insufficient complaint and inadmissible evidence in alleged, **157**—Ml
  febrile, (76) 482
  febrile and septic, active measures in, (69) 1193
  febrile, curetting in, advantages of, (72) 1113
  moral and ethical aspects of, (9) **396**
  perforation of uterus during treatment of, (93) **328**
  therapeutic, from forensic standpoint, (57) 867
  therapeutic, in mind disease, (103) 406
  tubal, abdominal, mechanism of, (66) 482
  tubal, hemorrhage after, toxicity of, (90) 868
ABORTION, tubal, polyneuritis of legs following local ischemia in legs and, (51) **1266**
ABSCESS: See also Cellulitis; Felon; Phlegmon
ABSCESS, bone and sinuses, tuberculous, tuberculin in, (75) **1493**
  bone, chronic, (124) 478
  brain, and sinus thrombosis, differential diagnosis between, treatment, (73) 242
  brain, extradural, at apex of petrous bone, (24) 1583
  brain, extradural, complicating frontal sinusitis, (108) 1328
  brain, frontal lobe of, (63) 241
  brain, metastatic, after suppuration of bronchial lymph-node, (81) 704
  brain, of otitic origin based on study of twenty-four cases, (16) 81
  brain, otogenic, (73) 1927
  cerebellum, and afebrile sinus thrombosis complicating acute otitis media in adult, (87) 399
  cerebellum, and labyrinthitis, differential diagnosis, (89) 84
  cerebrum, idiopathic, (13) **2068**
  cerebrum, originating in ear, (135) 706
  cerebrum, symptomatology of, diagnosis and indications for surgical intervention, (2) 474
  cervical, deep, treatment, (198) 1754
  cervical, of aural origin, diagnosis and treatment, (11) 479
  ear, middle, acute, (50) 477
  ear, outer, treatment, (130) **329**
  fallopian tube and ovary, typhotuberculous, (86) **783**
  fixation, (45) 631
  in omentum sac after necrosis of pancreas, (139) 1750
  in Pott's disease, (63) **1498**
  in pouch of Douglas, (116) 483
  intramural, during puerperium, (74) 363
  liver, abdominal and transpleural operative technic for, advantages of, (52) 1580
  liver, amebic, emetin for, **917**, (61) **1111, 1896**
  liver, modification of Rogers' method for, (26) **165**
  pelvis, drainage in pyosalpinx and, **1485**—ab
  pelvis, grape seeds in, (126) 1836
  pelvis, rectum section for, in men, (55) **1666**
  pneumococcal, of lung in children, (25) 1583
  spleen, pneumococcus peritonitis, secondary, with, (116) 951
  spontaneous, bacillus from, in rabbits and its relation to influenza bacillus, (30) **476**
ABSCESS, submaxillary, evacuation of, through mouth, (60) 1746
  ureter, (133) 1836
ABSINTHE, prohibition of, in colonies, **63**
ABSORPTION and digestion in light of serology, (140) 707, (149) 1270
ABSTRACTS in current medical literature, duplication of, (64) **2071**
ABYSSINIAN tea, (49) 631
ACADÉMIE de MÉDECINE, future permanent secretary of, **1806**
ACADEMY of Medicine, work and needs of, (86) 477
ACANTHOSIS nigricans, (50) 1666
ACCIDENTS, household remedies for, (122) 1404
  ski and coasting, (102) **1500**
  street, of London, want of ambulance provision, **916**
ACETABULUM, protruding floor of, (84) **793**
ACETANILID, fear of patent medicine man that public will buy it under official name, **1466**—E
ACETONE, bedside tests for diacetic acid and, (48) 1034
  bodies, acidosis with special reference to, (102) 1667
  in urine, influence of sodium bicarbonate on, experimental research on, (125) 251
  in urine of children, elimination of, (92) 1195
  reaction in children, clinical availability of, (93) 1195
ACHONDROPLASIA, fetal, clinical picture, (100) 1500
  fetal, familial, (148) 870
  with radiogram and necropsy, (3) 238
ACHYLIA, gastrica, chronic, anemic states with, (187) 1272
  pancreatic plus gastric, (101) 406
ACID, acetic, and acidosis, **1158**—E
  aceto-acetic, tests for, including simple new test, (39) **1670**
  acetyl-salicylic, (149) **252**
  acetyl-salicylic and potassium citrate, compatibility of, **390**
  acetyl-salicylic, technic of manufacture of, **689**
  amino-, as culture medium for bacteria, (20) 2069
  amino-, in urine in health and disease, (140) 1116, (187) 1753
  amino-, metabolism of, intermediary, (97) 1327
  Carbolic: See Phenol
  carbonic, in alveolar air, clinical investigation of, (11) **1979**
  cerebronic, (89) 1327
  citric, to check coagulation in puerperal phlebitis, (51) **403**

ACID, corrosive, stomach injury from swallowing, (35) **1583**
  cresotinic, therapeutic action of, (92) **319**
  destroying yeasts, influence of certain, on lactic bacteria, **1961**—E
  diacetic, and acetone, bedside tests for, (48) 1034
  fatty, unsaturated, as neurolytic agent, (22) 1739
  formic, formation and excretion of, conditions affecting, (40) 1665
  hydrochloric, formation in stomach, seat of, **838**—E
  hydrochloric, free, in stomach content, quantitative test for, (159) **1271**
  hydrochloric, in gastric juice, **284**—E
  hydrochloric, in gastric juice, behavior of, during kidney disease, (204) 874
  hydrochloric, in pernicious anemia, (69) **404**
  hydrochloric, secretion by stomach, influence of sodium chlorid on, (90) **477**—ab
  hydroxy, from ketonic aldehyds, enzyme concerned with formation of, (81) 1028
  Intoxication: See Acidosis
  nucleinic, in progressive paralysis, (129) 251
  osmic, trigeminal neuralgia treated by superficial injection of alcohol and, (71) 1666
  oxalic, production and elimination of, (48) 1985
  phosphoric, organic, of cotton-seed meal, (74) 161
  picric, and oil of cloves preparation of catgut, (157) 162
  pyrophosphoric, (69) **1028**
  Salicylic: See also Salicylates
  salicylic, action of, and chemically allied bodies in rheumatic fever, (8) **1264**
  salicylic, local application to thorax in pnuemonia, (107) **794**
  sulphuric, and copper sulphate poisoning, acute, blood findings in, (79) 792
  sulphuric, caustic pastes, ***434**
  sulphuric, dilute, carbuncles, boils, staphylococcic and streptococcic infections treated by internal administration of, (21) **1191**
  tannic, action on urethra, **1656**
  tannic, fermentation, (79, 80) 1327
  thiocyanic, ferment-arresting action of, in respect to pepsin, (138) 252
  uric, **465**
  uric, and purin bodies in urine, determination of, (111) 1037
  uric, calculi,. (114) 1030
  uric, chemical action of thorium X on, (54) 404, (72) 1035, (78) 1193
  uric, diathesis, electricity in, (2) 694
  uric, estimation, Ruhemann uricometer for, ***44**
  uric, in blood, colorimetric method for determining, (78) 161, (56) **318**, (74) 1028
  uric, in blood, determination of, (123) 329
  uric, precipitation of, bacteriologic factor in, (33) 947
  uric, reagent, Macallum and Folin's, composition of, **617**
  uric, solubility of, and proportion of ethereal sulphates in urine, (148) 638
  uric, test of, rapid, **1957**
  yeast, nucleic, action of yeast on, (51) 318
ACIDOSIS, (110) 1030
  and acetic acid, **1158**—E
  diabetic, (159) **872**
  diabetic, estimation of, (79) 704
  diagnosis of, (47) 403
  non-diabetic importance of, (31) 317
  postoperative, (35) 317
  respiration, types of, in health and, (184) 1753
  Wassermann reaction in diabetes mellitus and its relation to, ***1139**
  with special reference to acetone bodies, (102) 1667
ACNE, bacterins in, (68) 319
  etiology and treatment, ***582**
  ionic vaccine therapy in, (136) 243
  prescription, method of compounding, **851**
  vaccine, **1074**
  vaccine therapy of, **390**
  vulgaris, (65) 1742
ACOUSTIC nerve, affections of, curable, (106) 1328
ACRODERMATITIS perstans, dermatitis repens and infectious eczematoid dermatitis, possible interrelationship of, (37) **781**
ACROMEGALY develoipng after hysterectomy at 38, (82) 1586
  hypophysis changes with, (60) 2071
  in diabetes, nerve cells in isolated part of nervous portion of hypophysis-tumor in, new formation of, (2) **1663**
  three cases, with one autopsy, (28) 1492
ACTINOMYCOSIS, appendix, (82) 1927
  jaw, lower, (114) 1397
  roentgenotherapy of, (146) **707**
ADAMS-STOKES DISEASE: See Heart-Block
ADDISON'S DISEASE, (106) 1749
  acute, (63) **1586**
  in boy of 10, (24) **866**
  nervous and mental symptoms in, (13) 243
  with severe abdominal symptoms, (62) 1922
ADELHOLZ WATERS, rubidium in, (73) 1586
ADENOIDECTOMY, dangers of, (33) 1325
  mouth-breathing, persistent, following, (51) 696
ADENOIDS, (71) 477
  ear complications from, (131) 478
  follicular conjunctivitis and, (27) 861
  operation for tonsils and lesson from case of, (137) 162
  prevention of, (95) 1835
  removal of, and enucleation of tonsils under gas anesthesia, (15) 1399
  removing tonsils and, simple and satisfactory method for, (67) 1922
  tonsillitis and, in relation to other diseases, (40) 477
  tonsils and, (104) 698, (85) 1743
  tonsils and, in children, cause of, and lymph-node extract for, (6) 2067
  tonsils and, significance of, (61) 696
  tonsils and, treated without operation, (5) 2067
  tonsils and, treatment, (36) 1110
ADENOMA in intestines simulating stenosis of pylorus, (51) **1401**
  liver, primary, simulating Hanot's hypertrophic liver cirrhosis, (11) 624
  prostate, (101) 242
  thyroid and prostate, growth centers of benign blastomata with special reference to, (45) 627
  umbilicus, (91) 1037
ADENOMYOMA, uterus, (28) 631
  uterus, pregnancy with, (121) 320
ADENOMYOMATOSIS, subserous, of small intestine, (168) 872
ADHESIONS, abdomen, and kink, (52) 1833
  disturbances from, following pleurisy, (135) **1196**
  intra-abdominal developmental, abnormal, (24) 1837, (22) 1983
  pericardium, roentgenography of, (50) 631
  pericecal and cecal, **1389**—ab
  peritoneum, (24) **1109**
  peritoneum, of insidious toxic group, (114) 1328
  pleural, active respiration exercises to ward off, (96) **1930**
  sigmoid, **150**—ab
ADIPOSITY and hypophysis cerebri tumors, (126) **91**—ab
ADRENALIN: See Epinephrin
ADRENALS, (156) 1502
  and metabolism of fat, (99) 1403
  changes in, in pregnancy and after castration, (71) 1747
  cortex, development of, (62) 949
  cystic disease of, (92) **869**
  exposure of, to Roentgen rays, effect on blood-pressure, (150) 1198
  hemorrhage in, in newborn infant, (109) 251
  in health and disease, (170) **1272**
  massage, effects on blood-pressure, ***1777**
  origin of cyclic vomiting in children, (32) **1926**
  origin of excess of cholesterin in blood, (60) 482
  origin of periodical vomiting, (62) **1266**
  physiopathology of, (139) 1338
  tumors of kidney, testicle and, embryogenetic relationships of, **236**—ab
  with anencephaly, (108) 251
ADULTERATION of liquors, (168)
ADVANCE of Chicago drops nostrum advertising, **1801**—E
ADVERTISEMENTS, disguised, **1239**
ADVERTISING, clean, and Good Housekeeping, **291**—E
  clean, slowness of medical journal to realize changed attitude of public toward, **602**—E
  Clubs of America, Associated, **291**—E, **909**—E, **1646**—E
  demand clean, **53**—E
  fraudulent, and Birmingham Ledger, **1899**—P
  fraudulent, and Druggists' Circular, **837**
  fraudulent, and Meyer Brothers' Druggist, **838**
  fraudulent, Detroit Saturday Night in line against, **1711**—E
  fraudulent, in medical journals, **53**—E, **57**—E, **65**—P
  fraudulent, laws prohibiting, **1482**—ME
  fraudulent, "original article" and Jireh Diabetic Food Co., **1081**—E
  lack of uniform action by medical press in, **213**—E
  medical, **53**—E
  medical, and Harburg Bill, **1711**—E
  medical, Chinese drugs and, **1709**—E
  medical, layman and the newspaper, **599**—E
  medical, no compromise permissible in, **1361**—ab
  medicinal articles, reform in, (129) 1196
  misleading, **1174**—C
  nostrum, Advance of Chicago drops, **1801**—E
  nostrum, in medical journal and editorials in same journal, **1368**—E
  nostrum, in newspapers, **671**—E
  nostrum, in religious press, and American Medical Association, **1161**—E
  patent medicines, **134**—P
  pharmaceutical specialty house in, effrontery of, **380**
  specialists on Pacific coast, **1809**—P
  truth in, laws enacted in some states and considered by others, **1377**—P
  Wiley's attitude on, **1646**—E
AEROGEN and anaerogen coliform organisms, biochemistry of symbiotic growth of, (6) **1031**
AFRICA, color problem in south, **1894**
AGALACTIA, contagious, in sheep and goats, (39) 866
AGE determination, roentgenographic, Rotch method of, (147) 479
  limit of professorship in university, of Budapest, **1972**
  of parents as factor in heredity, **616**
AGGLUTINATION and sedimentation and their bearing on water storage, (22) 786
  non-pathogenic vibrios, properties and, (47) 1920
  reaction and experimental immunity in typhoid, ***1764**
  reduced, of typhoid bacilli in alkaline medium, (88) 1841
  test, macroscopic, for detecting fowls that are harboring bact. pullorum, value of, (56) 1187
AGGLUTININS, behavior of opsonins and, in animals after castration or injection of extract of testicles, (141) 252
  local, in diagnosis of tuberculosis, (53) 1332
AGGRESSINS, experimental research on, (164) 1675
AGRICULTURE, chemical imponderables in, (38) **246**
  experiment stations and science, **1156**—E
AIR: See also Oxygen
AIR, bacteria in, enumerating, sand filtration method and bubbling method for, comparison between, (19) 1027
  expired, toxins in, experimental research on, (168) 1271
  fresh, and children, (1) 238
  mercury refound in dust and, of rooms where mercury is handled, (167) 1198.
  oxygen poor, in anemia, (123) **560**
  pressure, physiologic effects of altitude and, **1554**
  swallowing in infants, cause of, (121) 407
  we breathe, composition of, **288**—E
ALABAMA medical news, **214**, **292**, **839**. **1368**, **1801**
  state board January report, **772**
ALASKAN natives, health of, **998**—E
ALBUMIN, alien, permeability of gastro-intestinal tract for, in sick infants, (115) 1404, (106) **1673**
  containing preparations of iron, absorption of, (107) 406
  determination, aid in diagnosis of kidney lesions, (93) 84
  dextrorotatory, in organic nature, (83) 1189
  in anaphylaxis, role of, (138) 707
  in fever, metabolism of, (105) 1335
  reaction in spinal fluid, effect of spinal cord compression on, (50) **324**
  reaction in sputum, (79) **168**, **1481**, (54) **1493**
  reaction in sputum for early diagnosis of tuberculosis, importance of, (45) **1584**
  reaction in sputum in tuberculosis, critical study, ***440**
  reaction in sputum of not much early diagnostic value, (213) 874
  starch and fat-splitting ferment, excretion of, in infants, (97) 406
  technic for removing, and determining residual nitrogen in organic fluids, (139) 1116
  tests, comparative merits of, (118) **951**
  tests, dissolved, for stomach cancer, (66) 1666
ALBUMINURIA, alkali in, (142) 1502
  in infants, newborn, (73) 2071
  induced, as test for latent nephritis, (120) **952**
  is it likely to recur in successive pregnancies? (1) **1831**
  life-insurance and, (3-5) 85
  of pregnancy, eye symptoms in, important, (53) 160
  of pregnancy, remote prognsois of, (36) **246**
  of pregnancy, signification of, determining, (17) **1983**
  orthostatic, (41) 318, (145) **1117**
  orthostatic, and tuberculosis, (116) **1196**, (85) 1586
  orthostatic, heart size and heart function in children showing, orthodiagraphic study, (39) **1832**
  orthostatic, pathology of, (99) **950**
  orthostatic, spine anomalies in, correction of, (138) 1270
  quantitative determination of, reliability and comparative simplicity of Claudius' method and Pfeiffer's modification of Tsuchiya's method, (85) 1671
  significance of, **421**—ab
  transient, (147) 1198
ALBUMOSE, Bence-Jones', in urine, multiple myeloma associactd with, (15) 1330
ALBUMOSURIA, myelomata, multiple, with numerous spontaneous fractures and, (11) 625
ALCOHOL, Benjamin Rush, pioneer investigator of effects of tobacco and, on man, (92) 1581
  consumption, decreasing, **1472**
  content of blood, (80) **704**
  denatured, **850**
  drunkenness and physiologic effect of, (32) 86
  from standpoint of individual and society, (133) 91
  in Austro-Hungarian army, **1722**
  in fatigue, (95) 1037
  in infectious diseases, **1651**
  in surgical sterilization, (128) 870
  inebriate in New Jersey, what can be done under existing conditions for, (78) 319
  injection in gasserian ganglion for trifacial neuralgia, ***1354**, **1725**—C, (59) **1840**, **2061**
  injection in neuralgia, (74) **1036**
  injection in trifacial neuralgia treated by superficial injection of osmic acid and, (71) 1666
  intestine absorption of, (49) **1741**
  Methyl: See Methyl-Alcohol
  morals and health of our soldiers, (42) **862**
  nervous system and, (132) 91
  poisoning, chronic, cirrhosis of liver after, experimental, (132) 569
  therapeutic uses and limitations, (49) 1261, (115) 1923
  toxemias from, (126) 1030
  Wood: See Methyl-Alcohol
ALCOHOLISM: See also Inebriety
ALCOHOLISM, abstinence delirium in chronic, (104) 406
  combined treatment, (29) 709
  epileptoid states in, (112) 705
  hereditary, is undeniable fact, (113) 1397
  heredity and, (107) 735
  homosexuality and, (129) 636

ALCOHOLISM in children apparently free from morbid heredity, (51) 944
  insanity, (85) 319, **380**
  mentality and, (134) 1836
  syphilis and tuberculosis, (109) 1835
  treatment, ***1933**
ALDEHYDS, ketonic, enzyme concerned with formation of hydroxy acids from, (81) 1028
  toxicity of, **756—E**
ALEXIA, developmental, (72) 1262
ALIENISTS to meet, **1311**
ALIENS, charitable relief to, international conference on, **1009**
ALIMENTARY TRACT: See Gastro-Intestinal Tract
ALKALIES and hyperchlorhydria, (114) 478
  calcium balance depends on intake of, (108) 705
  in albuminuria, (142) 1502
ALKALINES, action of mineral waters and, (165) 1675
ALKALOIDS, poisonous, medicolegal test for, (77) 1036
ALKAPTONURIA, (19) 239
ALLERGY: See Anaphylaxis; Immunity
ALLYL sulphid in tuberculosis, (45) 1265
ALTITUDES, high, new blood formation at, (97) **1749**
  high, physiologic study of effect of, (99) 1269
  high, pulse at, (87) 1748
  high, tuberculosis at, in Andes, experimental, (162) 708
  physiologic effects of air pressure and, **1554**
ALTON surgeons' meeting, **843**
ALVEOLAR air, carbonic acid in, clinical investigation of, (11) **1979**
ALVEOLES, carbon-dioxid tension in, technic for determining, (51) 791
AMANITA-hemolysin and its antihemolysin, mode of union between, (37) 861
  -toxin, (38) 861
AMAUROSIS, hysteric, syphilitic meningitis plus, (100) 793
AMBULANCE car, street railway, first, **1726—C**
  corps and field hospital, evolution of, (89) 1189
  dogs, **299**
  service for accidents and other casualties in streets and public places in London, efficient, (40) 1265
AMEBA: See also Entameba
AMEBA, parasitic, and disease, (16) 239
  parasitic and free-living, relation to dysentery, **1824—ab**
AMEBIASIS: See Dysentery, Amebic
AMERICA, medical impressions of, **286—E**, (137) **706**, (71) 949, (120) 1198
  medical, seen with foreign eyes, Jaffe's reply to editorial on, **1975—C**
  medical study tour to, in 1912, (102) **869**
  safeguarding against disease, **759**
AMERICAN Academy of Medicine meeting, **1471**
  Academy of Opthalmology and Otology meeting, **1006**
  Association for Cancer Research, **2019—ab**
  Association for Promoting Hygiene and Public Baths meets, **1717**
  Association of Medical Examiners meet, **1649**
  Association of Officials of Charity and Correction to meet, **1893**
  Climatologic Association, **1717**
  College of Surgeons, **1471**, **1552**
  Dermatological Association elects officers, **1552**
  Gastro-Enterological Association meets, **1372**
  Gynecological Society officers elected, **1733—ab**
  Laryngological Association, **1717**
AMERICAN MEDICAL ASSOCIATION, Albany alumni at Minneapolis, **1804**
  alumni to meet at Minneapolis, **1170**, **1458**, **1717**
  amblyopias, toxic, **2004**
  and its great work for profession, **77—ab**
  as seen by Australian visitor, **610—ab**
  auditor's report, **1991**
  blindness, prevention of, report of commttee on, **2003**, **2006**
  by-laws, **1993**
  clinics at Minneapolis, **1010**, **1459**
  commercial exhibit, **1508**
AMERICAN MEDICAL ASSOCIATION, Conference on Medical Education and Medical Legislation, **690—ab**, **774—ab**
  constitution, amendments to, **2019**
  Council on Health and Public Instruction, report of, **1999**
  Council on Medical Education, report of, **2013**
  Council on Pharmacy and Chemistry, **1989**
  Davis memorial, **1990**
  educational work of speakers' bureau, **1095—ME**
  elections by Board of Trustees, **680**
  entertainments, social, **1093**, **1458**
  excursions from Minneapolis, **460**, **1506**
  exhibit illustrating medicinal plant cultivation, **1558**
  expert testimony, **2002**
  golf club courtesies during Minneapolis session, **1655**
  health, public, education among women, report of committee for, **2010**
  hotels at Minneapolis, **764**, **1170**, **1314**, **1504**
  in session at Minneapolis, **1961—E**
  index to the Journal, **2051—E**
  Jacobi's address as president, **1962**
  Judcial Council, report of, **1993**
  local committee for next annual session at Minneapolis, **615**, **1504**
  medicolegal bureau, **2002**
  meetings in University of Minnesota buildings and entertainments at club-houses on lakes at Minneapolis session, **680**
  membership in, **762**
  membership, uniform regulation of, report of committee on, **2012**
  methyl alcohol, **2004**, **2008**
  Minneapolis by way of Northwestern line, **1313**
  Minneapolis, city of, **1433**
  Minneapolis Session, **1465—E**, **1889—E**, **2052—E**
  Minneapolis Session, official call, **1430**
  Minneapolis Session, special trains to, **535**
  minutes of sixty-fourth annual Session, **1962**
  Mumford's "Table Talk" on annual meeting and election of officers, **77—ab**, **222—ab**
  non-affiliated organizations, meeting of, **1504**
  ophthalmia neonatorum, bill for act entitled an act for prevention of, **2004**
  organizations interested in public health to which invitation was sent, **2001**
  Orthopedic Surgery Section, **65**
  pictures of officers, **1889—E**
  Porto Rico, Medical Association of, asks for membership in, **1965**
  railway sanitation, committee on, **2002**
  rates for round trips to Minneapolis, **1313**
  registration at Minneapolis Session, **1457**
  research, protecton of, report of committee for, **2009**
  responsible for improvement in advertising pages of religious journals, **1161—E**
  resuscitation from electric shock, report of committee on, **2009**
  resuscitation from mine gases, committee on, **2002**
  scientific exhibit for Minneapolis meeting, **1455**, **1457**
  secretaries of state societies, conference of, **1989**
  secretaries, state, meeting, **1457**
  Secretary's report, **1963**
  section banquets, **1458**
  Section on Gastro-Enterology and Proctology, proposed, **1965**
  section programs, **1447**
  speakers' bureau, **1999**
  state board statistics for 1912, **1623**
  Sunday, public health, **1457**
  trachoma, report on, **2004**, **2007**
  transportation to Minneapolis, **1505**
  trip to Glacier National Park, **1010**
  Trustees, Board of, report of, **1966**
  University of Minnesota greeting, **1443**
  Vaughan, Victor, president elect, **2052—E**
  vice-chairman of section committees, **1504**
  vision, conservation of, plan for formation of state societies for, **2008**
  visual standards for pilots, report of committee on, **2009**
  vital statistics law, model, committee on revision of, **2002**, **2012**
  women physicians, banquet of, **1458**
AMERICAN MEDICAL ASSOCIATION, work of Public Health Education Committee, relation to state and county society, (65) 160
AMERICAN medical colleges establish branches in China, **843**
  medicine and nostrum prescribing, **1368—E**
  Medico-Psychological Association meets, **1804**
  Mine Safety Association and prevention of mine accidents, **1081—E**
  Pedriatic Society meeting in Washington, D. C., **1237**, **1552**
  Pharmaceutical Association to appoint council on patent medicines, suggestion for, **1547—E**
  Physicians and Surgeons, Congress of, meeting in Washington, **1311**, **1660—ab**
  Society for Physicians' Study Travels, **66—C**, **457**, **1095**, **1372**, **1560**, **1717**
  Society of Tropical Medicine meeting, Washington, D. C., **1237**
  Surgical Association desires articles on fractures, **1655—C**
AMIDO-AZOTOLUOL and scarlet red, clinical value of, (70) 1402
AMMOCOETES branchiales, metamorphosis of endostyle of, (39) 1260
AMMONIA coefficient in pregnancy, 60 cases, (11) 1831
  utilization of, in protein metabolism, (47) 1665
AMNESIA, post-apoplectic, (64) **1746**
AMNIOTIC membrane grafts, ***973**, (109) **1029**
  membrane grafts, articles on, **1977**
  sac, rupture of, at seventh month of pregnancy continuing to term, (85) 868
AMPULLA of Vater, cancer of, (56) **1332**
AMPUTATION, arm, to ensure movable stump after, (141) 1406
  below knee instead of exarticulation, (135) 637
  flaps, (93) 1396
  for gangrene, technic for, (94) 559
  leg, for gangrene in infant 11 days old, recovery, (25) 1191
  leg, technic for, (157) 1502
  special reference to lower extremities, (87) 945
AMUSEMENTS for growing children, suitable, (135) 1328
AMYLENE-CHLORAL solution, **1881**
AMYOTONIA congenita with autopsy, (2) 1576
ANACHLORHYDRIA with liver disease, (165) 1271
ANACIDITY, feces with hyperacidity and, (64) **325**
ANAEROBE and acute rhinitis, ***2033**
  cultivating, improved technic for, (142) 870
ANAEROGEN and aerogen coliform organisms, biochemistry of symbiotic growth of, (6) **1031**
ANALGESIA: See Anesthesia
ANAPHYLATOXINS and endotoxins of typhoid bacillus, (33) **626**
  bacterial, clinical importance of, (88) 950
  influence of leukocytes on, (89) 1929
ANAPHYLAXIS: See also Immunity
ANAPHYLAXIS, (15) 780, (20) 1330, (58) 1580
  albumin in, (138) 707
  alimentary, to eggs, (33) 1034
  and infectious diseases, **1058—ab**
  blood in, **832—E**
  burns, death from, due to, **289—E**
  calcium in relation to, (34) **1106**
  eosinophilia and, connection between, (78) 249
  fever and, **1721**
  following injection of diphtheria antitoxin, (5) 1031, (63) 1266
  gastric juice and, (56) 948
  immunity and diseases in relation to, (2) **624**
  literature on, **770**
  nature of, and relation to immunity, (57) **1188**
  not due to toxic action of any special substance, (48) 1670
  reaction, interrelations in streptococcus group with special reference to, (41) **1920**
  reaction, is specificity of, dependent on chemical constitution of proteins or on their biologic relations? (38) **1921**
  reaction of plain muscle in guinea-pig and, (35) **861**
  research on, (44) **1985**
  serum, (112) **1750**
  to hen's eggs, bronchial asthma due to, (61) **399**
ANAPHYLAXIS to milk, (150) 1751
  to quinin, (174) 1676
  tuberculo-protein and tuberculin, (33) **1665**
  tuberculo-protein, effect on subsequent infection with bacillus tuberculosis, (40) **398**
  vaccination and local, ***569**
ANASTOMOSIS and fistula operation, combined for gangrenous hernia, (26) 700
  arteriovenous, ***360**
  arteriovenous, for threatened gangrene of foot, **2024—ab**
  arteriovenous, in gangrene, three cases, (61) 166
  blood-vessel, cannula forceps for, (41) 552
  facio-hypoglossal, case of, (35) 1983
  intestine, lateral, modification of Ferguson-Grant method, (104) 1262
  liver and intestine, (85) **168**
ANATOMIC differences between infants and adults, **391**
ANEMIA and bone-marrow metastases in stomach cancer, (27) **788**
  blood injection in, (125) **636**
  blood regeneration in, (167) 1502
  carbohydrate metabolism in, (117) 560
  carbon monoxid may be cause of headaches and, **1883—E**
  child of 7, roentgenotherapy effectual stimulant in simple, (50) 247
  children, chlorotic type of, (50) 192
  from hemorrhage, (86) 704
  infants, newborn, iron in, (68) **1112**
  infants of city, carbon monoxid poisoning cause of, (67) **1112**
  Leishman: See also Kala-Azar; Leishmaniasis
  Leishman, (98) 406
  Leishman, in child in region north of Naples, (117) 951
  Leishman, in Southern Italy, (74) **1113**
  oxygen-poor air in, (123) **560**
  pernicious, (84) 242, (93) 399, (56) 863, (59) 1107, (80) 1834, (62) 1986
  pernicious, acquired hemolytic jaundice with, effect of splenectomy on, (167) 1271
  pernicious, cryptogenetic, salvarsan in, (65) 1666
  pernicious, family, ***176**
  pernicious, hydrochloric acid in, (69) **404**
  pernicious, idiopathic, origin of, (87) **1403**
  pernicious, in rabbits, experimental production of, (40) 1981
  pernicious, in tuberculosis, (51) 631
  pernicious, salvarsan in, (7) 243, (7) 479
  pernicious, thorium X in, (55) 404, (49) 944, (82) 1113
  pernicious, tongue and mouth mucous membrane disturbances in, (103) 698
  pernicious, treatment, (10) 1982
  pernicious, with alcholuric jaundice, (14) 865
  progressive, changes in red blood-corpuscles in, (165) 1198
  respiration, inadequate in, means for improvement, (134) **1116**
  splenic, (124) **952**
  splenic, and hemolytic jaundice, (125) 560
  splenic, and splenectomy, (4) 1264
  splenic, pathology of, (109) 635
  subcutaneous medication in, (97) 1397
  treatment, (123) 251, **474—ab**
  trypanosome, experimental, (21) 786
ANENCEPHALIA, (53) 1982
  adrenals with, (108) 251
ANESTHESIA, abdomen rigidity under, causes and avoidance of, (19) 1264
  artificial airway for, surgical, ***1858**
  blocking gasserian ganglion, (84) **483**
  blocking of nerves in leg, effectual and harmless, technic for, (64) **702**
  blocking sciatic nerve, (103) **951**
  blood-pressure before, during and after operations under local and general, **1737—ab**
  chloroform, epinephrin in, (20) 1668
  chloroform, in nose and throat surgery, (68) 628, (30) 861
  cocain, complete laryngectomy under, (109) 1667
  dentists' and general, **532**
  ether administration, (155) 162
  ether and chloroform, **1304—E**
  ether, by drop or open method, (162) 163

ANESTHESIA, ether, given by drop method with closed inhaler, (96) 1835
ether, intratracheal, (97) **1263**
ether, intravenous, (108) 170, (61) 1580
ethyl chlorid, (13) 1495
ethyl chlorid, general, (100) **484**
ethyl chlorid, general, advantages and technic of, (113) 328
ethyl chlorid, of mental nerve, (107) 1842
extradural, chair for, (141) 637
extradural, for surgical and gynecologic operations, (126) **706**
extradural, operations under, preliminary report, (74) **628**
fractures reduced under local, (76) 2072
gas, enucleation of tonsils and removal of adenoids under, (15) 1399
general, (81) 628
general, by intramuscular injection of ether, (146) 1197
general, by intravenous injection of ether-salt solution, (99) 84
general, by intravenous route, (73) 628
general, examination of liver functioning before, importance of, (114) **1269**
general, in cataract work, (72) 242
general, twilight sleep in, (70) 1193
general, with magnesium sulphate, mechanism of, (59) 2071
heart strain during, severe, danger and prevention of, ***1273**
hedonal, (54) 87
hedonal, in children, (3) 479
hyoscin-morphin, for alcohol injection in neuralgia, (26) 1330
in Philippine General Hospital, experiences in, (8) 1394
infiltration, (156) 1118
insufflation, Meltzer's, in respiratory paralysis during operations on brain, advantages of, (52) **1927**
insufflation, resection of wall of thorax under, (87) 1037
intrapharyngeal insufflation, ether vaporizer for use in, technic of, ***892**
intratracheal, emphysema, subcutaneous, extensive, following, (90) 783
intratracheal, in experimental work, (153) 162
intratracheal insufflation, (8) **316**
intratracheal insufflation, literature on, **390**
intratracheal insufflation, modified technic, (114) 951
intratracheal insufflation outfit, new and inexpensive, ***826**
intravenous, (103) **705**, (106) 1108, (74) 1402
intravenous, experiences with, (49) **166**, (92) 783
intravenous, for operation on hand and foot, (48) **166**
isopral, intravenous, disadvantages of, (57) 1926
local, (129) 91, (11) 243
local and general, (107) 1667
local, and goiter operations, (166) 163
local, and nerve blocking, (50) 1839
local, by aid of electricity, (145) **1338**
local, for appendicectomy, (137) 1197
local, for extraction of teeth, improved technic for, (59) 1746
local, for joint operations, (150) **1270**
local, for operations on rectum, (74) 83
local, for operations on sternum, (88) 1194
local, for operations on stomach, (96) **484**
local, for practical use in hospitals, (50) 166
local, for reduction of fractures and dislocations, (131) 560
local, herniotomy under, (117) 162
local, in general surgery, (77) 1743
local, in minor gynecology, (98) 1835
local, in ophthalmology, otorhinology and some branches of major surgery, (92) 242
local, ligation of superior thyroid for goiter under, (107) 1189
local, operations on ears under, (52) 1839
local, paravertebral, (71) 1840
local, prostatectomy under, **1488**—ab
local, removal of brain tumor under, (115) 1269
ANESTHESIA, local, technic for, (120) 91—ab, (132) 330
local, technic for superficial nerves in relation to, (132) 1501
local, thyroid removed under, (3) 1031
mixed, (110) 1037, (127) 1405
nitrous oxid gas, essence of orange ether and sequestration in, for operations in upright position, (72) 1922
nitrous oxid-oxygen, (86) 242, (127) 401, (71, 72) 783, (58) 1262
nitrous oxid-oxygen, advantages and disadvantages of, from surgical viewpoint, (86) 242
nitrous oxid-oxygen and ether vapor, improved technic of, (72) 83
nitrous oxid-oxygen, for dentistry and surgical purposes, (8) 164
obstetric, (104) 161
of brachial plexus, paralysis of diaphragm after, (136) 1197
of brachial plexus, supraclavicular, (9) **945**
orange-ether, essence of, (106) 1397
oxygen as adjuvant in general, (40) 1110
present day method of, (47) 1107
quinin and urea hydrochlorid as local, in surgery of rectum and anus, (132) 1836
scopolamin in, danger of, (112) **1588**
scopolamin-pantopon, unreliability and by-effects of, (157) 1271
shock during, (10) 1923
spelling of, **1977**
spinal, (117) 85, **315**—ab, (87) 406, (157) **1118**
spinal, anatomic predisposition to paralysis of sixth nerve as complication of, (158) 708
spinal, and belt constriction, fatalities after, (133) **870**
spinal, dangers and disadvantages of, **1915**—ab
spinal, death from, ***442**
spinal, development and present status of method, 1,065 cases, (28) 1496
spinal, in gynecology, (97) 1835
spinal, stovain strychnin, (84) 1499
spinal, technic for, (99) **483**
spinal, tropacocain, symptoms suggesting heart block after, (98) 1269
technic of, (57) 1666
Trendelenburg position and, ***1273**
vapor, advantages of, (61) 1262
ANESTHETIC action of cinchona alkaloids on cornea, (81) 1113
for laparotomy, selection of, (12) **396**—ab
general, effect on composition of blood, (147) 1116
paraldehyd as, (9) **316**—ab
vapors, warming, (156) 162, (52) 862
ANESTHETISTS, expert, plea for more, (101) 1189
ANESTHOL, **616**
ANEURYSM, abdominal aorta, (135) **1674**
abdominal aorta, roentgenoscopy in diagnosis of, value of, (119) 1264
abdominal, operated on by Colt's apparatus, (5) **1836**
aorta, diagnosis of, (50) **1401**
aorta, fistula between bronchus and esophagus with, (89) 1114
aorta, hemoptysis after perforation of, (62) **1840**
arteriovenous, importance of veins with, experiemntal research on, (65) 702
carotid artery, (49) 357
cirsoid, of hand, (73) **1666**
femoral, traumatic, cured by Matas' method of endo-aneurysmorrhaphy, (40) 81
industrial, in file-grinders, (87) 1490
multiple, in lead poisoning, chronic, (16) 1668
of artery in brain, perforation of, diagnosis, (163) 562
subclavian, bilateral, (43) 1326
thoracic, (34) 1265, (23) 1330, (15) 1582
thoracic aorta, diagnosis, (113) **162**
thoracic aorta, symptomatology, diagnosis and treatment, (26) 1027
treatment, (210) 1754
tuberculous, of right common iliac artery, ***1413**
ANGINA and scarlet fever, (81) **406**
pectoris, **281**—T, (14) 1264
pectoris, tobacco, **1473**, (30) 1583
Vincent's: See Vincent's Angina
ANGIOMA, larynx, chronic laryngitis in relation to, (2) 550
peripheral nervous system, (67) 702
placenta, (95) 328
ANGLO-AMERICAN Medical Association meet, **1552**
ANILIN-DYE workers, tumors of genito-urinary tract in, **206**—E, (153) **1675**
ANIMAL as converter of plant nutriments into human foodstuffs, **904**—E
calorimetry, (52) **318**
diagnostic inoculation of, (112) 406, (144) **561, 927**
domestic, and public health, (77) 1982
domestic, pathologic dangers to, from contaminated water, (35) 695
experimentation, justification of, (31) 1260
experimentation, medical profession and public opinion, (151) **243**
lime requirements of, influence of function on, (70) 1028
research, operating table for use in, (16) 1104
tissues, diastase and glycogen of, (48) 318
tissues, lipase and fat of, (47) **318**
tissues, oxygen in, localization of, (104) 1500
ANION treatment, bactericidal action of, (158) 871
ANKLE, ankylosis, treatment, (57) 948
fracture, (100) 90, (37) **947**
fracture, double, outcome of, (100) 705
fracture, pseudarthrosis after, (57) 166
injuries at or near, (49, 53) 87
outward bending of, and flat-foot, causes of, (98) 1114
resection of, lengthwise incision for, (93) 483
ANKYLOSIS, ankle, treatment, (57) 948
bony, of joints, restoring mobility after, (144) 479
elbow, treatment of, (161) 1752
infected knee-joint with drainage without subsequent, (131) 242
interphalangeal articulations, inherited, congenital, (78) 1333
jaw, (32) **947**
joints, bony, restoring mobility after, (82) **1922**
spine, (78) 553
vertebrae, hip and shoulder joints, (87) **1987**
ANKYLOSTOMIASIS: See Uncinariasis
ANOPHELINES, color marking and other variable characters of, and systematic and phylogénetic grouping of species, (4) 1397
species of, in transmission of human malaria, **1822**—ab
ANOREXIA, (135) **1116**
nervosa, clinical and laboratory study, (106) 1835
psychic, at puberty, (92) **1334**
ANTARCTIC expedition, national, 1910, career of Dr. Wilson of, **760**
ANTHRAX bacillus, conveyance of, in clothes, **1311**
Bradford, investigation board, **1008**
cutaneous, (105) 1397
external, treatment, (108) 405
internal, and workmen's compensation, (99) 1195
ANTIANAPHYLAXIS in research on toxicity in urine in acute infectious diseases, (78) 326
ANTIBODIES, experimental production of, in cattle, (88) 1672
for ricin, (50) 1670
in tuberculosis, importance of, (122) 560, (119) 1501
in tuberculosis, in cattle, production of, **1801**—E
isolated, in cerebrospinal fluid, (26) **475**
ANTICUS antagonistic reflex, tibialis, (90) **1748**
ANTIDIPHTHERITIC globulins and serum antidiphthericum, **1074**
ANTIFREEZING mixtures for automobiles, **147**
ANTIGEN, attempt to separate from nucleoprotein of plague bacillus by filtration through gelatin, (21) 1744
ANTIGONOCOCCUS serum, **1227**
ANTIHEMOLYSIN, union between amanita-hemolysin and its, mode of, (37) 861
ANTIKAMNIA, **1172**—P, **1477**—P
Chemical Company and Hurburgh bill, **1711**—E
ANTILEUKOCYTOLYSINS and leukocytolysins, origin of, (35) 789
ANTIMENINGITIS serum, subdural injection in cerebrospinal epidemic meningitis, accidents following, ***1937**
ANTIMENINGOCOCCUS serum, **1074**
serum in gonorrheal urethritis, (93) 89, (55) **247**
ANTIMERISTEM-SCHMIDT for cancer, **766**—P, **1244**—P
ANTIMONY in spirochete and trypanosome disease, (86) 1113
salts, insoluble, in small doses effectual in trypanosome diseases, (60) 1840
ANTINARCOTIC bill introduced in Congress, **310**—ME
ANTIPYRETICS, analgesics and hypnotics, **610**—ab
ANTISEPTICS in eyes, abuse of, (166) 1502
ANTISTAPHYLOCOCCUS serum, polyvalent, potent, preparation and employment of, ***1070**
ANTISTREPTOCOCCUS serum, **1227**
serum used locally in vaccinal ulcers, (7) **940**
ANTITOXIN administration, (33) **398**
diphtheria, (139) 560, (98) 635, (65) 1266, (123) **1843**
diphtheria, anaphylaxis following injection of, (5) 1031, (63) 1266
diphtheria, immunizing doses of, value of, **147**
diphtheria, in epidemic cerebrospinal meningitis, (160) 1675
diphtheria, intravenous dosage of, experimental research on, (102) **1749**
diphtheria, no anaphylaxis to, (112) 1750
diphtheria, refound in serum and proper dosage, (84) 1037
in blood of diphtheria patients after serotherapy, (76) 326
in nervous phenomena of diphtheria, (111) 705
large doses of, given early, means of preventing larynx stenosis, (45) **862**
ANTITRYPSIN content of blood with pregnancy and cancer, (174) 562
ANTIVIVISECTION legislation, history, aims and menace, ***1511**
ANTIVIVISECTIONISTS lose suit for libel, **1718**
ANTRUM, maxillary, suppuration of, treatment, (101) 1581
ANURIA, hysteric, ***826**
ANUS, fistula in, (5) 396
imperforate, three cases, (72) 1189
pruritus of, (95) 1923
quinin and urea hydrochlorid as local anesthetic in surgery of rectum, (132) 1836
surgery of rectum and, (27) 86
tuberculosis, surgical, of colon, rectum and, (44) 480
AORTA, abdominal, aneurysm of, (135) **1674**
abdominal, aneurysm of, roentgenoscopy in diagnosis of, value of, (119) 1264
abdominal, controlling postpartum hemorrhage by manual compression of, method of, (145) 162
abnormally narrow, postoperative fatalities from, (65) **1986**
aneurysm, diagnosis, (50) **1401**
aneurysm, fistula between bronchus and esophagus, with, (89) 1114
aneurysms, hemoptysis after perforation of, (62) **1840**
calcification of esophagus obstruction due to, ***801**
compression, effects on circulation, (57) 1326
insufficiency, (181) 488
regurgitation, diastolic pressure in, determination of, (10) **1979**
stenosis, congenital, (195) 488
syphilitic disease of, (82) **1194**, (109) 1269 (129) 1270
syphilitic disease of, diagnosis and treatment, (18) **396**
thoracic, aneurysm of, diagnosis, (113) **162**
thoracic, aneurysm of, symptomatology, diagnosis and treatment, (26) 1027
APHASIA, (126) 242
complex, and parietal syndrome with necropsy, (53) 1192
localization of lesion, (1) **1258**
motor, subcortical and cortical, unreliability of alleged test for differentiating, (65) 1746
total, case of, (51) 1746

APHASIA, transient, from malaria, (128) 407
APHTHONGIA, (67) **628**
APNEA and carbon dioxid, **999—E**
APONEUROSIS, palmar, retraction of, thyroid treatment effectual in, (33) 700
APOPLEXY; See Brain, Hemorrhage
APPARATUS: See also Instrument.
APPARATUS, aspiration, continuous, (51) 398
  ball-valve, for administration of salvarsan, (50) 1028
  bed and emergency cot, combined, ***122**
  bottle-holder for feeding babies, new, ***1535**
  Colt's, abdominal aneurysm operated on by, (5) **1836**
  douche-can and sterilizer, combination, portable, ***279**
  drainage, suprapubic, new, ***514**
  electric headlight, *cheap* and efficient, (132) 242
  ether pad and cone, new, ***1619**
  ether-vaporizer, ***892**
  extension, for hip-joint disease, (100) 84
  field sterilizer, rough and ready, (32) 1669
  for artificial respiration in emergencies, ***1407**
  for collection of urine from female babies, ***2045**
  for exercising back in scoliosis, (70) 791
  for injection and lavage of pelves of kidneys and ureters, ***184**
  for obtaining blood from vein or heart of animal, (159) 479
  for use in blood cultures, new, ***649**
  gravity and syringe method for intravenous injection of salvarsan, combined, ***824**
  illuminating operating-room, improved, ***1846**
  illuminator, oblique, improved, (66) 1396
  inhalation treatment, new, (87) **697**
  intratracheal insufflation anesthesia outfit, ***826**
  intubation tubes for larynx stenosis, specially devised, (136) 1030
  Kuhn's aspiration mask, (66) **632**
  medical, and patents, **1239**
  obstetric rubber dilating bag, new, (105) **1263**
  operating-table for rhinologists, ***1951**
  orthopedic table in fracture, ***1850**
  pipet filling, ***663**
  pulmotor, for artificial respiration on asphyxiated newborn infant, (11) 694
  rented instead of sold outright, (150) **871**
  Roentgen-ray generator, improved, (95) 1189
  salvarsan administration, new and simple, ***1782**
  salvarsan, intravenous injection of, (103) 478
  scoliosometer for measurement of scoliosis, (42) **1497**
  shelf for rectum and vaginal operations, ***1537**
  somnoform inhaler, new, (6) 1668
  suction hand-valve for clearing operative field, ***897**
  test, for hearing, (101) 1269
  urinal, retention, after cystostomy, (65) 1671
APPENDECTOMY and herniotomy by inguinal canal, (96) **90**
  early, necessity for, (119) 1404
  in herniotomy, (45) 246
  local anesthesia for, (137) 1197
  subserosa, (121) 1038, (104) 1588
  technic of, (62) 166, (136) 637
APPENDICITIS, (43) 318, (44) 477, (121) 1030, (51) 1493
  acute, angulation of terminal ileum, acute, cause of intestine obstruction in, (34) **1741**
  acute, modern treatment, (100) 478, (44) 552
  Bastedo's sign, (36) **1265**
  bearing of sex on operation in, (27) 1033
  blood-borne origin, (39) 557
  blood-count in, (137) **1751**
  Blumberg's sign in, **616**
  castor oil in, (125) **1196**
  cellulitis of obscure clinical and bacteriologic nature complicating, fatal case, (11) 1668
  children, very acute cases, (17) 1577
  chronic, (24) **1186**, (106) **1335**
  chronic, and disease of ovaries, (41) **1331**
APPENDICITIS, chronic, and female pelvic organs, (130) 485
  chronic, in children, (37) 1191
  chronic, secretory activity of stomach in, with gastric symptoms, (30) **245**
  conditions simulating, (5) 1923
  diagnosis of, by referred pain in epigastrium from pressure over appendix, ***350**, (37) 1583
  diagnosis of pneumonia and, (86) 1189
  diagnosis of, pre-operative, new method by dorsal examination, (10) **322**
  foreign bodies and, (51) 477 (71) 1188
  gangrene of ileum complicating, (36) 81
  gangrenous, unusual histories, (5) 555
  gynecologic disease and, (161) **1198**
  helminths causing, (74) **1499**
  hemorrhage with, tardy, (94) 1500
  immediate operation, plea for, (4) 864, (21) **865**, (31) 1033
  in infant sixteen days old with appendix in inguinal hernial sac, (37) 81
  in Prussia in 1911, **609**
  in scarlet fever, (86) **1334**
  lime water as probable cause of, (81) 783
  liver in, (56) 241
  medical treatment, (56) 1107
  movable kidney with or simulating chronic, (61) 558
  mucous colitis and membranous pericolitis, corelation of, **149—ab**
  origin of, and function of appendix, (5) 864
  overeating cause of acute, (88) **84**
  oxyuris causing (137) 870 (130) **1750**
  paratyphoid, (53) 1670, (99) 1672
  pathogenesis of, (67) **326**
  peritonitis due to, from bacteriologic standpoint, (52) 166
  peritonitis due to, treatment, (65) 791
  postoperative complications, (53) 1028
  pregnancy and, (10) 1831
  retrocecal, **150—ab**, ***1285**
  sacral kidney simulating acute, (83) 83
  spontaneous healing of, (101) 250
  suppurative, (57) 1028, (53) 1926
  suppurative, acute, tetany in, in adult, (19) **1668**
  surgical aspect of, (52) 1261
  thrombosis and embolism after operations *for*, (96) **869**
  traumatic, (151) 330
  tuberculous *mesenteric* lymph-nodes simulating, (30, 31) **239**
  with symptoms of diseases of urinary tract, (42) 318
  women and, (81) 1927
APPENDICOSTOMY *instead* of colostomy for obstruction due to irremovable cancer of *rectum* and colon, (3) **555**
  multiple applications of, (46) 1331
APPENDIX, actinomycosis of, (82) 1927
  as substitute for bile-duct, (131) 1501
  cancer, (28) 402, (100) 559, (56) **1927**
  cancer, lipoid content of, (82) 792
  changes in general infection and peritonitis, (168) 488
  cysts, (33) 86
  excisor, (16) 1980
  exclusion, (131) 252
  exclusion, disadvantages of, (132) **1337**
  female genitals and, (65) 1927
  function of, and origin of appendicitis, (5) 864
  functional nature of cecum and, (17) 86
  gangrene of coil of small intestine and, operation, recovery, (4) 555
  in hernia, incarcerated, (38) 2069
  in indigestion, (21) 551
  in inguinal hernial sac in appendicitis in infant sixteen days old, (37) 81
  inflamed, distention of, intermittent, eleven cases, (91) 1500
  mucocele, removal, (70) 1107
  palpation, (61) 1035
  present knowledge of, (54) 1326
  pseudomyxoma in peritoneum involving ovaries and, (106) 1269
  removal of, when reasonably possible, should be the rule, (23) 1185
  retroperitoneal rupture of, with extravasation of pus into and gangrene of entire thigh, ***1782**
APPENDIX roentgenoscopy, (79) 1586
  roentgenoscopy shows it actively movable, (127) 1501
  stump, self-invaginating hemostatic stitch for, (50) **1580**
  suture, purse-string for covering stump of, simple method of introducing, ***29**
  suture, self-inverting, for stump of, (136) 321
  tuberculosis, (15) 1926
APRAXIA, status of (59) 1188, (25) 1395
ARGON, (112) 794
ARGYLL Robertson pupil becoming normal after mercury in salvarsan, ***664**
  sign in non-syphilitic disease, (104) 90
ARHYTHMIA, **594—T**, (68) 1834
  complex, (43) 324
  differentiation and importance of, (91) 1334
  perpetual, sudden death in, (40) 1191
ARIZONA medical news, **1801**
  state board January report, **930**
  state board October report, **468**
ARKANSAS Eclectic May and November reports, **154**
  graduates of Eclectic Medical University of Kansas City go for license to, **1887—E**
  medical news, **214, 292, 756, 839, 911, 1083, 1234, 1801, 1889**
  state board November report, **469**
ARM, amputation of, to ensure movable *stump after*, (141) 1406
  and shoulder paralysis of poliomyelitis, (67) 1580
  circulation in, (2) 1738
  phlegmon on, technic for treatment, (147) **486**
  symmetrical area of purpura on left and zona on right, (83) 89
ARMY families, infant hygiene in, **382**
  list, medical examination of men on, **844**
  medical school commencement, **1893**
  medical service in Africa, **534**
  medical students entering, scholarships for, **1896**
  sanitary organization of, in India in war, (18) 1033
  United States, medical department of, in Civil War, (111) 242, (92) 478
  United States medical department of, preparedness of, in field medical supplies, (94) 478
  United States Medical Reserve Corps, N. Y. division, (91) 1189
  United States, typhoid vaccination in, **1167**
  venereal diseases in, **213—E**
ARNETH'S method in lung tuberculosis, results, (3) 1743
ARSENIC, absorption of, following intramuscular injections of salvarsan and neosalvarsan, (53) **241**
  acute pneumonia during treatment with, (10) **865**
  eosinophilia under treatment with, (122) 1673
  hypersusceptibility to, (76) 404, (123) 870
  in cerebrospinal fluid, examination following salvarsan administration, (69) **241**
  in kala-azar, (22) 1669
  lipoid compounds of, (160) 487
  poisoning after salvarsan, (137) 485
  poisoning during treatment of syphilis, (90) 406
  poisoning, evidences of, **1710—E, 1901—C**
  poisoning from wall paint, (118) **1931**
  therapy, (59) 627
ARTERIES, active participation in blood circulation by, (121) 1501
  aneurysm of, in brain, perforation of, diagnosis, (163) 562
  axillary, circular resection and suture of, for transverse laceration by fracture dislocation of anatomic neck of humerus, (143) 162
  carotid, aneurysm of, (49) 1557
  carotid, internal, anomalous, (42) 1492
  carotid, internal, anomalous, its clinical significance in tonsil operations, ***172**
  coronary sclerosis of, **203—T**
  femoral and brachial, suture of, (67) 1402
  femoral disposition of sciatic nerve and, anatomic considerations of, (23) 1191
  functional disease of, (49) 791
ARTERIES, gastrodudenal, hemorrhage from erosion of, by duodenal ulcers, **151—ab**, (31) 1832
  grafting, (54) 557
  hyaloid, persistent, ***173**
  iliac, changes in, in syphilis, (163) 872
  iliac tuberculous aneurysm of right common, ***1413**
  ligation of, effect on nitrogen balance, (44) 1741
  meningeal, middle, traumatic rupture of, without skull fracture, (3) 1418
  mesenteric, embolism of, temporary, ***513**
  process of repair in, (196) 873
  pulmonary, influence of contents of, on experimental lung tuberculosis, (30) **1980**
  pulmonary, surgery of, **2024—ab**
  renal arteriosclerosis of, (82) **1841**
  renal, excretion of nitrogen subsequent to ligation of successive branches of, (45) **1665**
  resistance to suppurative processes, (148) 1198
  surviving, action of histamin on, (39) 861
  suture of, in infected wound, successful, (151) **1270**
  tuberculosis of large, ***1413**
ARTERIORRHAPHY, (9) 1031
ARTERIOSCLEROSIS, (94) 698, (37) 1579, (53) **1839**
  clinical observations, (27) 1492
  etiology and pathology, (95) 698
  experimental, (25) **946**
  fundus, oculi, signs of, early, (13) 1739
  heart in, (70) 1666
  high blood-pressure and, (73) 1327
  kidney arteries, (82) **1841**
  not disease of old age alone, (21) 1395
  physiologic methods in treatment, (118) **400**
  premature, (77) 319
  prevention of heart disease and, in healthy individuals past middle life, ***803**
  probably not an important factor in etiology and prognosis of involution psychoses, (47) 81
  stasis reaction in, (78) **1402**
  stomach, (172) **1272**
  treatment, **1913—ab**
ARTERIOVENOUS anastomosis, ***360**
  anastomosis for threatened gangrene of foot, **2024—ab**
  aneurysm, importance of veins with, experimental research *on*, (65) 702
ARTERITIS obliterans, non-syphilitic, (28) 556
ARTHRALGIA, epinephrin in neuralgia and, (97) **1335**
ARTHRITIS: See also *Gout; Joint* Diseases; Rheumatism
ARTHRITIS, acute, among negro laborers on Canal Zone, 100 cases, ***1065**
  and splanchnoptosis, relationships between, (8) 940 (49) 1028, (20) 1105
  autogenous vaccine therapy in epidemic of tonsillitis and acute, **1813**
  chronic, and tuberculous rheumatism, (53) **1401**
  chronic, therapeutic evidence of incidence of streptococcal infection, (6) 1982
  classification of, (127) **321**
  deformans, (143) **561**
  deformans, certain types of, management of, **858—ab**
  deformans due to necrosis of cartilage, (53) 948
  deformans, radium in, **2061**
  deformans, serodiagnosis for streptococcus, gonococcus and other bacteria in infective, ***1208**
  gonorrheal, in arthritic subjects, (88) 477
  gonorrheal, meningococcus serotherapy of, (36) **1984**
  gonorrheal, vaccine in, (175) 1272
  hemophilic, simulating osteomyelitis, (64) 1266, (41) 1400
  hip-joint, traumatic, crippling, function-restoring operation in, cheil*otomy*, (5) **1743**, (6) 1836
  ileocolostomy for, legality of (11) **1032**
  in seamen, chronic, some forms of, (13) 1032
  purulent, in infants, (133) **1590**
  rheumatoid, (39) 240, (9) 861, (1) **1494**
  rheumatoid, etiology of, (25) **1984**
  rheumatoid, in children, (16) 1330
  rheumatoid, vaccine therapy of, (26) 1983

ARTHRITIS, streptococcus, in rabbits, experimental, (40) **1921**
ARTHRODESIS, indications for, (89) 1194
  of hip joint, (71) 1586
ARTHROPLASTY, (26) **1832**
ARTHROSYNOVITIS, chronic, hysteric *joint affection simulating, (145)* 638
ARTICULATIONS produced experi*mentally in fracture of bones, (48)* **1497**
ASCARIS LUMBRICOIDES as complication of surgical operation, ***1953**
  of bile passages simulating cholelithiasis in elderly, (137) 1501
ASCITES, autoserotherapy of liver cir*rhosis with, (57)* **1402**
  condom for draining, (130) **637**
  drainage of, into saphenous vein, (69) **1333**, 1559
  drained permanently through silver tube into subcutaneous tissue, (182) 563
  fetal, labor, difficult, due to, (26) 1837
  in cirrhosis of liver, tuberculous nature of, (62) 248), (83) **558**
  nephritis with bilateral hydrothorax, general edema and, in secondary *syphilis*, (18) 1330
  precipitation of fibrinogen in fluid, differentiates it from cyst content, (108) 328
  pseudochylous, (5) 629
  spleen enlargement, chronic, with cirrhosis of liver and, (124) **952**
ASELLIUS and discovery of lymph circulation, (40) 782
ASEXUALIZATION: See Castration; Sterilization, Unfit; Vasectomy; Vasostomy
ASKLEPIOS, sacrifice to, (24) 317
ASPERGILLUS NIGER and fumigatus, sporulation of, (29) 1926
  pharynx infection by, ***900**
ASPHYXIA, insufflation of air, systematic, as first aid in, technic for, (130) 1405
  Neonatorum: See Infant, Asphyxia of Newborn
  pallida, (11) 864
ASPIDOSPERMIN, **69**
ASPIRATION, continuous, apparatus for, (51) 398
  mask, Kuhn's, (66) **632**
  mask, Kuhn's, simple substitute for, **768—O**
ASPIRIN: See Acid, Acetyl-Salicylic
ASSASSINS, *American, prospective*, prevention, (47) 1395
ASSOCIATED Advertising Club of *America*, clean advertising and power for good of, **291—E**, **909—E**
  Advertising Clubs of America, Dr. Wiley commends, **1646—E**
ASSOCIATION of American Medical Colleges, annual meeting of, **391**, **858**
  of American Medical Colleges wants to add one more year to course in medicine, **854**
  of Surgeons of Army and Navy of Confederacy, **1893**
ASTHENIA, general, and diabetes, (36) **2070**
ASTHMA, (127) **706**, (67) **791**
  and tuberculosis in children, (34) 1034
  bronchial, (88) 697
  bronchial, due to hypersusceptibility to hens' eggs, (61) **399**
  chronic, in rachitis, (148) 1270
  endobronchial treatment of bron*chitis and*, (135) **408**
  epinephrin in, (50) 944
  heart, (9) 699
  nose treatment in, clinical results, (62) **1326**
  salvarsan in, (104) 1189
ASTIGMATISM, lenses to correct, simple method and equipment for determining, (2) 780
  regular, diagram for teaching varieties of, ***1538**
ASTRAGALUS, pure dislocation of articulation of, with scaphoid bone, *twelfth case on record*, (106) 705
ASYLUM wanted for one demented, **1246**
ASYSTOLE, Karell's milk cure in, (130) 407
  toxemia with, (82) 1499
ATAXIA, LOCOMOTOR: See Tabes Dorsalis
ATELIOSIS and progeria, (15) 69
ATHEROMA and heredity, (89) 950
  of uterus blood-vessels, metrorrhagia due to, *(19)* **695**
ATHEROSCLEROSIS, gastro-intestinal; experimental, (168) 1753
  of atrioventricular valves, (123) 1270
ATHETOSIS, associated movements in, (197) 563
ATHLETICS and dilatation of heart, (207) 874
  Bavarian research on effects of, **917**
  college, *in after-life*, **300**
  competitive, **603—ab**
  competitive, and heart, (115) 705
  competitive, and physician's responsibility, (216) 564
  for girls, **77—ab**
  health and, **446—E**, **769—C**
  health in navy and, **131—E**
  over-exertion of heart in, chronic, prognosis of, (132) **1844**
  stimulants and, (85) 1402
ATMOSPHERE, general sanitary influence of, (196) 563
  influence on general health, (150) 1406
ATOPHAN, composition of, **1320**
ATOXYL, parasite-attracting action of neosalvarsan and, (168) 562
ATROPHY, *optic nerve, familial*, (135) 952
  progressive, of spinal muscles, spinal cord changes with, (90) 1672
  prostate, (152) **1674**
ATROPIN, efficacy of, in tinnitus, (125) 91
  in stomach disease, (125) **1843**
  pilocarpin or epinephrin tests for autonomic nervous system in children, (121) 1931
  poisoning, mental symptoms in, unusual duration of, (33) 1028
  why blood annuls toxic action of, (178) **1753**
AUBERGIER'S *lactucarium*, **538—P**
AURICLE fibrillation, (6) **164**, **665—T**
  fibrillation, automatic movements of ventricles with, (42) 1746
  in mitral stenosis, (12) 1108
  tumor of left, primary, pulsation in esophagus and in jugular vein in, (71) 1267
AUSCULTATION and percussion, principles of, (26) 1109
  dorsal, of heart and blood-vessels, (123) **636**
  of pathologic changes in lungs, early, ***2027**
  pleximeter, (54) 324
AUSTRALIA, nostrums in, **844**
AUSTRIAN investigation of commercial digitalis preparations, **143—P**
  sanitary preparations in event of war, **918**
AUTOGENOUS Vaccine: See Vaccine, Autogenous
AUTO-INTOXICATION and eye, (139) 322
  and psychoses, methods of treatment, (119) 85
  books on, **1095**
  farinaceous diet and, **1378—C**
  Intestinal: See Intestine, Intoxication
  uveal tract, diseases due to, (16) 1395
AUTOLYSATES, fetal, for cancer, Fichera's method of preparing, **228**
  of skin of animals yielding vaccine, immunizing action of, (144) 92
AUTOLYSIS, (30) 1330
  bacteria, different comparative resistance to, (36) 1330
  cancer treated by, **228**
  of *coli communis bacillus*, (31) 1330
AUTOMATISM, (29) 1400
AUTOMOBILES, antifreezing *mixtures* for, **147**
AUTOPSY: See Necropsy
AUTOSEROTHERAPY, (113) **1269**
  in liver cirrhosis with ascites, (57) **1402**
  in serofibrinous pleurisy, ***962**
AUTOTHERAPY, (90) 84, (125) 162
  in acute articular rheumatism, (12) 940
AUTOVACCINE THERAPY in flaring up of old urethritis during influenza, (64) 558
  of furunculosis *in infants*, (156) **872**
AVIATION and human body, **371—E**
AXILLAE, cancer affecting *both breasts* and, recurrent, extensive, complete eradication, (22) 244
  temperature in rectum and, comparison of, (47) **2070**
AXIS cylinders, degeneration and regeneration of, in vitro, (37) **626**

B

BABCOCK subcutaneous extraction method of treating varicose ulcers, (136) 1844
BACCELLI, honors for Freund and, **297**
BACILLURIA and pyuria, (70) 88
BACILLUS abortion in cow's milk, (35) 1981
  abortion, maintenance of virulence by, (39) 1920
  abortion, persistence of, in tissues of inoculated animals, (34) 1981
  acid-fast, in blood-stream, ***995**, (174) 1272, (141) **1338**
  anaerobic, curved, motile, in uterus discharges, (38) **1106**
  anthrax, conveyance of, in clothes, **1311**
  Bordet-Gengou, in relation to lesion of whooping cough, (49) **1187**
  Carriers: See Carriers, Bacillus
  causing multiform erythema, (122) 1749
  coli vaccine, **1074**, **1461**
  colon communis, *absorption of oxygen by growing cultures of B. welchii and*, (73) 161
  colon communis, autolysis of, (31) 1330
  colon communis, in blood, (35) 86
  colon communis, infection of kidney, (60) 1922
  colon communis, infection of urinary organs, experimental, (141) 1750
  colon communis, infections with, in women, and herpes of face and mouth, relation between, **1234—E**
  colon communis, inhibitive action *of bile on, (36)* **1920**
  colon communis, isolation of, (17) **1027**
  colon communis, peritonitis due to infection with, fatal, ***1297**
  colon communis, puerperal, invasion of blood, (132) 252
  colon communis, suppurative bladder disease, (88) 1333
  diphtheria, cultivation of, improved technic for, (50) 2070
  diphtheria, in secretions of nose *and throat in infants with nutritional* disturbances, (111) **1269**
  diphtheria, in urine, (77) **327**, (144) **871**
  diphtheria, staining technic for, (90) 1268
  diphtheria, tumors due to, (94) 1403
  dysentery, laboratory notes on, (29) 552, (101) 1397
  from spontaneous abscesses in rabbits and its relation to influenza *bacillus, (30)* ***476***
  fusiform, associated with various pathologic processes, (40) **1106**
  fusiform, isolation and cultivation, (41) 1106
  gram-negative, nasal catarrh, acute, due to, (24) 244
  lactic acid, action on *percentage of* glucose in urine in diabetics, (87) **477**
  leprosy, bacteriolytic differentiation of, (136) 1270
  leprosy, cultivation and differentiation from other acid-fast species, (39) **1981**
  leprosy, in blood, (107) 869
  necrosis, experimental study of, (51) 1670
  paratyphoid, not producing gas, (106) 869
  plague, avirulent, mixed with agar, immunization of guinea-pigs by vaccination with, (110) 84
  plague, infection of guinea-pigs, monkeys and rats *with doses of*, ranging from one bacillus upward, (111) **84**
  plague, inoculated into body cavity, susceptibility of cockroaches to, (113) 1836
  prodigiosum, infection in man by, (17) 699
  proteus group, isolated from case of septicemia, (14) **2068**
  pseudodiphtheria, in middle-ear disease, (45) 790
  pyocyaneus, *septicemia*, acute, due to, (1) **1329**, (11) 1923
  pyocyaneus, general infection from, (75) 404
  pyocyaneus vaccine, **1074**
  suipestiens, typhoid-like disease in rabbits caused by, clinical course and *prophylactic* vaccination, (33) 1981
  tubercle, a synthetic product, **675—E**
  tubercle, and pleurisy, (31) 86
BACILLUS, tubercle, attenuated, and fluctuation in virulence, (39) **246**
  tubercle, attenuated, in tuberculosis treated with sodium *fluorid*, (45) **1497**
  tubercle, attenuated, prophylaxis with, (77) **703**
  tubercle, bacteriologic examination of sputum for, (8) 1668
  tubercle, behavior of, toward fat-dyes, (45) 1106
  tubercle, biology of, (36) **1981**
  tubercle, bovine, significance of, to man, **1167**, (78) **1267**, (77) 1402
  tubercle, branched forms of, and *immunity* to tuberculosis, ***993**, **1002—E**
  tubercle, branched forms of, in treatment of human tuberculosis, ***1294**
  tubercle, double infection with human and bovine types of, ***202**
  tubercle, effect of hypersensitiveness to tuberculo-protein on subsequent infection with, (40) **398**
  tubercle, fat in, origin of, ***290—E***
  tubercle, human, in milk of vaccinated cow, (19) **787**
  tubercle, in apparently sound tissues, latent "lymphoid" stage of, (134) 1406
  tubercle, in bile and prophylaxis of tuberculosis, (87) **634**
  tubercle, in blood, (107) **1038**, (126) 1116, (113) **1673**, (110) **1750**, *(196)* ***1754***, *(93)* ***1988***
  tubercle, in blood, finding of, ***995**
  tubercle, in blood in surgical tuberculosis, (105) **705**
  tubercle, in blood, none found in fifteen tuberculosis *patients* examined, (69) 1671
  tubercle, in blood of non-tuberculous, (75) **326**
  tubercle, *in blood-vessels, fate of*, (194) 563
  tubercle, in dust, determination of, *(74)* **1267**
  tubercle, in heart, (112) 251
  tubercle, in sputum, changes of shape of, (93) 1334
  tubercle, in sputum, concentration method for detecting, (129) 85
  tubercle, in sputum, phagocytosis of, *influence of iodid medication on*, (91) **1114**
  tubercle, in urine with *tuberculosis* of testicle, (88) 1268
  tubercle, living and dead, relative value of, and of their *endotoxins* in solution in active immunization against tuberculosis, (50) 1107
  tubercle, living, can they be patented? (167) 487
  tubercle, microscopic study, technic for, (86) **1195**
  tubercle, organism *and, relations* between, (118) 560
  tubercle, portals of entry and spread of, (24) 480
  tubercle, portals of entry of, es*pecially in children*, (3) 699
  tubercle, spores in, chemical conditions favoring production of, (61) **627**
  tubercle, virulence of, and persistence in circulation, (20) **158**
  tubercle, vital staining of, experiments in, (33) **476**
  typhoid, agglutinability of, induced variations in, ***1141**
  typhoid, anaphylatoxins and endotoxins of, (33) **626**
  typhoid, cultivation of, from spot in luetic typhoid subject after fastigium, (19) 944
  typhoid found in tubo-ovarian abscess, (86) **784**
  typhoid, gaseous products of fermentations of dextrose by B. coli communis, *B. welchii and*, (72) 161
  typhoid, hyperleukocytosis following *injection* of, specific and extreme, in immunized rabbits, ***1950**
  typhoid, in alkaline medium, reduced agglutination of, (88) 1841
  typhoid, meningitis in infant due to, (54) 1187
  typhoid, on tonsils, (84) **1195**
  typhoid, toxic split products of, (15) **1261**
BACK, *muscle weakness in*, hygiene of, (157) **872**
  weak *or painful*, anatomic explanation of *many* cases of leg paralyses and, (17) 475, (1) 859
BACKACHE and joint strain, (40) 160
BACKWARDNESS: See also Feeble-Minded

BACKWARDNESS in children, defective eyesight in relation to, (79) 477, ***1059**
BACTERIA, amino-acids as culture medium for, (20) 2069
  cultivation of, certain technic for, (144) 408
  different comparative resistance to autolysis, (36) 1330
  gas metabolism of, (72) 161
  in air, enumerating, sand filtration method and bubbling method for, comparison between, (19) 1027
  in gasserian ganglion, herpes of brow with, (68) 1840
  in water, method of counting, (34) **1984**
  infection due to, ethylhydrocuprein in experimental, (121) 484
  lactic, influence of certain acid-destroying yeasts on, **1961**—E
  pasteurization, efficient, survived by certain, **1462**—E
  pathogenic, sale of, and crime, **1555**
  pathogenicity and virulence of, (31) **631**
  permeability of intestine wall for, and protecting action of omentum, (155) 1502
  ptomain producing, in human intestinal flora, (22) 946
  pullorum, macroscopic agglutination test for detecting fowls that are harboring, value of, (56) 1187
  pullorum, outbreak of acute disease in adult fowls due to, (55) 1187
  races of, effect of size of population on rate of selection of new, (25) 401
  saprophytic, in hog, pathogenic for man, (81) 326
BACTERIAL count, 37°, (28) 695
  extracts, digestive, in gonorrhea and *other infections*, ***1061**
  metabolism and internal medicine, (12) **1980**
  therapy and bacteriology of kidney calculus and its sequels, ***1213**
  therapy, use and abuse of, ***489**
BACTERIN: See Vaccine, Bacterial
BACTERIOLOGISTS, American, Society of, annual meeting, **218**
  and serologists at seat of war, **61**
BACTERIOLOGY and pathology, year's progress in, (32) 552
  and vaccine therapy of distemper in horses, (21) 1578
  ear, (70) 1396
  paratyphoid fever epidemic, (28) **781**
BACTERIOLYSIN, leukocytic, and body fluids, (41) **1261**
BACTERIOLYSIS, inhibiting action of carbon dioxid on hemolysis and, (41) 866
BAG, obstetric rubber dilating, new, (105) **1263**
BAKER, A, J., swindler who operates through medical profession, **1717**
  arrested, **1893**
BAKER'S itch, cause and treatment, **541**
BALANITIS, gangrenous, (61) 404, ***1769**
BALDNESS and stiff hat, **1233**—E
BALKAN War, cholera at seat of, (96) 950, (144) 1270
  lessons of, **1311**
  news from seat of, (171) 872, (60) 1111, (58) 1266, (137) 1270, (121) **1336**, (124) 1501, (29) 1583, (73) 1671, (140) 1674, (45) 1746, (72) 1840, (95) 1841, (116) 1931, (20) 2071
  surgical notes, **139**
  wounds in, more serious than at first supposed, **1552**
BALNEOTHERAPY: See also Baths; Hydrotherapy
BALNEOTHERAPY in heart disease, (85) 1841
  in kidney disease, (127) 636
BALSAM of Peru, historical note, (16) 1923
BANANA a fruit in sterile package, **209**—E
BANNERMAN'S intravenous solution, **1724**—P
BANTI'S DISEASE; See Anemia, Splenic
BARBERS, incorporation of surgeons and, (9) 164
BARDENHEUER'S technic versus Steinmann's nail technic for extension in fracture, (100) 1114
BARIUM sulphate, commercial, efficiency of, in roentgenography, **389**
BARRACKS, effect of overcrowding in, on tuberculosis among Gurkhas, (19) 1033
BASEDOW'S DISEASE: See Goiter, Exophthalmic
BASS and JOHN'S method for cultivation of malarial plasmodia, importance of, (74) 167
  method of cultivation of benign tertian malarial parasites in vitro, (8) **1398**
  method of cultivation of malarial parasites in vitro, (5) 401, (85) 1987
BASTEDO'S sign, symptom of chronic appendicitis, (36) **1265**
BATHS: See also Balneotherapy; Hydrotherapy
BATHS, carbonated, (118) 1030
  physiology of, (18) 323
BAVARIAN research on effects of athletics, **917**
BEARD growth and congenital hematoporphyrinuria in women, (64) 1840
BEAUTY doctoring, (84) 477
BED and emergency cot, combined, ***122**
BEDBUG, **1885**—E
  destruction of cockroaches and, **1902**
  resistance of, to various reagents, powders, liquids and gases, (1) **401**
BEEBE'S thyroid serum, **1016**
BEHRING'S vaccination against diphtheria, (45) **1839, 1896, 2051**—E
BELL system creates health department, **457**
BELLADONNA, (57) 1262
BELT constriction and spinal anesthesia, fatalities after, (133) **870**
BENCE-JONES albumose in urine, multiple myeloma associated with, (15) 1330
  proteinuria, (21) 946
  proteinuria in conditions other than myelomatosis, instance associated with metastatic cancer, (33) 159
BENDER hygienic laboratory, (2) 1918
BENZIN and iodin methods of skin sterilization in emergency work, (42) **1028**
  skin corrosion from, (69) 949
  sterilization of skin with, hematuria five to ten days after, (96) 1749
BENZOL in leukemia, (128) **251**, ***495**, (118) 636, (145) **707**, (160) **872**, (65) **949**, (132) 1038, (142, 143) **1270**, **1575**—ab, (65) 1586, (134) 1674
BERIBERI, (93, 94) **554**, (58) 1395
  blood-vessels in, (24) 165
  cause, **274**—ab, (159) 1752
  cause and nature of, experimental study, (50) 1111, **1823**—ab
  in Europe, (128) **1405**
  infantile, (16) 244
  infantile, in Philippines, (27) 1665
  milk of women with, action on frog's heart, (56) 82
  studies on, (7) 1582
BERLIN first-aid service, changes in, **761**
  letter, **63, 141, 221, 299, 381, 459, 532, 679, 761, 844, 917, 1010, 1088, 1167, 1239, 1312, 1374, 1473, 1553, 1650, 1720, 1806, 1896, 1971**
  medical expert member of city council, **1088**
  Medical Society, home for, **1088**
  Medical Society, non-medical women at, **141**
  municipal housing bureau in, establishment of, **609**
BESREDKA'S method of vaccination, (22) **1744**
BEZOAR as charm against disease, **1504**—ab
BIBLIOGRAPHY, *psychology* of blunders in, (133) **1406**
  style in, in medical literature, (91) 477
BICYCLE devised for stiff knee, (110) 635
BILE, (49) 1034
  absent from intestines, metabolism of children with, (5) **1576**
  analysis of human, quantitative chemical, (87) **1327**
  -duct, appendix as substitute for, (131) 1501
  -duct, common, and hepatic, angulation of junction of, after cholecystostomy simulating common duct obstruction, (16) **625**
  -duct, common, draining of, into duodenum, and systematic dilatation of duodenal *papilla* and, (184) 563
  -duct, common, functional and anatomic regeneration of, after introduction of T tube, (99) 1500
BILE-DUCT, common, gall-bladder calculus in, technic for removing, (153) 1198
  -duct, common, gall-bladder calculus lodged in, diagnosis, ***171**
  -duct, common, surgery of, (139) **870**
  -duct, dilatation of, congenital, (75) **867**
  -duct, fat and nitrogen metabolism in congenital absence of, (6) **238**
  -duct, gall-bladder calculus obstruction of common, (48) 2070
  -duct, growths in gall-bladder and, (31) 1983
  -duct, stenosis of, in newborn infants, (95) 406
  -duct, surgery of gall-bladder and, technic, (66) 1831
  elements in blood, various conditions in which they are found, (13) **789**
  feeding of, lost in fistula, (86) **169**
  hernia, (62) 1586
  influence on putrefaction in intestines, (49) 1497
  inhibitive action of, on bacillus colon communis, (36) **1920**
  mediums, Stokes', for sending cultures to laboratories, experiences with, (29) 695
  peritonitis, (49) 1585
  peritonitis without perforation of biliary tract, (73) 249, (59) **325**
  toxicity of, (28) 551
  tract, ascaridiasis of, simulating cholelithiasis in elderly, (137) 1501
  tract drainage, (48) 477
  tract, pathologic conditions of, treatment, (147) 1030
  tract, surgery of, (38) **477**, (15) 1324
  tuberculosis bacilli in, and prophy- [illegible] (87) **634**
  [illegible]30, (33) 1264
  lesions of, (32) 402
  urethra calculus in, (145) 1674
BIOLOGY, general, questions of, (128) 1038
  of soul, (162) 1118
  universal, (182) 1272
BIOSOL, **767**—P
BIRMINGHAM Ledger and fraudulent advertising, **1899**—P
BIRTH, causes of, (35) **159**
  -mark: See Nevus Maternus
  -rate, declining, (72) 249
  -rate, declining, and means to combat it, (105) 90
  -rate, declining, causes of, (111) 869
  -rate declining, in Berlin, **459**
  -rate, failing, eugenics and heredity, (38) 1400
  -rate, reduction in Prussia, official investigation of, **300**
  ratio of sexes at, **1902**
  registration, improved, petition for, **1239**
  registration, practical value of, **910**—E
BISHOP'S antitoxin hypothesis, inadequacy of, to explain symptomatology in morphin addiction, **688**—C
BISMUTH, appendicitis in relation to, (71) 1188
  meal, considerations of, (48) 631
  paste, (43) 1493
  paste, Beck's petrolatum as substitute for, **1488**—ab
  paste, Beck's substitute for, (86) 483
  paste in chronic suppurations, (99) 1108
  paste in ear and nose, (101) 399
  salts, insoluble, antacid properties of, **1175**
  salts used in mediums to detect formation of sulphur bodies of bacterial origin, (8) **1184**
BLACKWATER FEVER, (129) 1030
  clinical study in Korenko, Formosa, (49) 1111
  Leishman's chrome-cells in, origin and significance of, (15) 244, (24) 787
  protozoa-like structures in blood in, (36) 1745
  suppression in, treatment, (17) 1837
BLADDER, calculi in large diverticulum of, eight, (62) 1671
  calculus, cystoscopy with, (43) 1400
  calculus, Egyptian, histology of, (112) 1404
  calculus formed in, around thermometer, (65) 558
  calculus in children, surgical treatment, (88) 945
  calculus in diabetes, (84) **1841**
BLADDER calculus, lithotripsy for, advantages of, (90) 1988
  cancer, high-frequency current for, (130) 320
  cancer of syncytial structure in young man, (151) 1674
  [illegible] by, (3) 1923
  [illegible] suppurative
  contracture of neck of, ***257**
  diabetes mellitus with disease of, pneumaturia and apparent subsidence of glycosuria in, (149) 1674
  diseases, diagnosis and treatment, (68) 1493
  diverticulum in, (95) 1500
  double vagina, vulva and, with successive full-time pregnancy and labor in each uterus, (11) **946**
  exclusion, operation of, necessity and expediency, 2065—ab
  exstrophy, improved methods for correcting, (55) 701
  fissure, (40) 701
  fistulas, urinals for, (71) 791
  formation of cecum, (130) 252
  fundus of, ***1765, 2060**—C
  gas embolism from injection of air into, fatal, (42) 701
  gauze sponge removed from, another from vagina, months after a Duehrssen operation for uterus prolapse, ***1879**
  hairs apparently growing in, (186) **873**
  hernia, (95) **484**, (160) 1118, (68) 1927
  high frequency current for operation on, (109) 1037
  inflammation of neck of, (143) 1674
  irrigation of urethra and, (88) 1262
  male, changes in form and position from infancy to old age, (74) 1327
  operations, intravesical technic for, advantages of, (107) 1930
  papillomata of urinary, benign, with Oudin high-frequency current introduced through catheterizing cystoscope for, (76) 628
  paralysis and sudden death in pneumonia, (67) 1746
  paralysis in poliomyelitis, (139) 330
  prolapse, treatment, (64) 783
  prostatectomy-suspension of, (22) 1105
  rupture from contusion, recovery after suture, (103) 1114
  suppuration around, diffuse, (38) **701**
  suture of, after high incision for *calculi*, immediate, (106) **407**
  syphilis, (148) 1674
  tuberculosis, (127) 1589
  tuberculosis, exclusion of, (87) 1333
  tumors, early recognition of, (17) **860**
  tumors, fulguration in, (14) **1395**
  tumors in workers with anilin dyes, (153) **1675**
  tumors, recent cases at Massachusetts General Hospital, special reference to operative technic, (18) 860
  tumors, roentgenoscopy of, (100) 1262
  ulcer, ***419**
  ulcer, callous, pathology and treatment, (118) **1328**
  ulcer, syphilitic, ***1943**
  weakness of, in women, treatment, (107) **1115**
BLASTOMA, benign, growth centers of, special reference to thyroid and prostate adenomata, (45) 627
  in eel, (170) 488
BLASTOMYCETES in conjunctivitis resembling trachoma, (80) 326
BLASTOMYCOSIS, clinical resemblance of syphilis and, to *sporotrichosis*, occasional, ***115**
BLIND children, training of, (78) 477
  is right eye blind in *hydrophobia*, **1320**
  operation bestowing vision on child born, (69) 1266
BLINDNESS: See also Ophthalmia Neonatorum
BLINDNESS and ophthalmia neonatorum, (141) 478
  due to intra-ocular disease, (138) 162
  heredity of, (77) 477
  in later life, prophylactic measures for, (69) 697
  methyl-alcohol, ***1762**
  prevention of, (76) 477
  prevention of, report of committee on, **2003**
  real, monocular, sudden, recovery, (19) 941
  scarlatinal uremia with, (54) **631**
  trachoma in relation to, (137) 478
BLOOD: See also Hemoglobin; Leukocytes

BLOOD, acid-fast bacilli in, (174) 1272, (141) **1338**
action of pneumococcus on, (30) 1578
alcohol content of, (80) **704**
amount expelled from heart at each beat, (108) 1749
analysis of tissue and protein metabolism from standpoint of, (31) 626
and bone marrow changes in infantile scorbutus, (57) 1498
and heart action in healthy children, (70) 2071
anesthetics, effect of, on composition of, (147) 1116
antitoxin in, in diphtheria patients after serotherapy, (76) 326
antitrypsin content of, with pregnancy and cancer, (174) 562
apparatus for, obtaining, from vein or heart of animal, (159) 479
appendicitis of blood-borne origin, (39) 557
bacillus coli communis in, (35) 86
benzol in diseases of, (118) 636
bile elements in, conditions in which they are found, (43) **789**
biology of, (76) 168
calcium salts abstracted by fetus from mother's, cause of rapid progress of tuberculosis, (6) 1831
carbon monoxid in, demonstration of, (185) 1272
catalase content of liver and, with mouse cancer, (124) 91
catalase in malignant tumors, (56) 1395
-Cells, White: See Leukocytes
changes in eclampsia and pregnancy kidney, importance for treatment, (86) **868**
changes in sympathetic ophthalmia, (31) 943
chlorid content of, on different diets, (80) 1671
cholesterin content of, variations in, under typhoid vaccination, (70) 1267
cholesterin *excess in*, adrenal origin of, (60) 482
cholesterin in, in various diseases, (98) 1403
circulation, active participation in, by arteries, (121) 1501
circulation, rival claims to the discovery, ***814**
-clot, value in operations for acute and chronic mastoiditis, (66) 477
coagulability, test of, (157) **562**
coagulation, (86) 327
coagulation, influence of gelatin on, (110) **1115**
coagulation, platelets in, (62) 632
coagulation time of, books giving technic for *determining*, **769**
coagulation time of, clinical study, (8) 1258
coagulation time of, in infants and children, (2) 238
coagulation time of, simple method for determining, (122) 407
coccus-like bodies or marginal points in, are merely shreds of broken down red corpuscles, (84) 2072
colloidal copper, action of, on, (77) 867
-corpuscle, red, changes in, in progressive anemia, (165) 1198
-corpuscle, red, count, high, significance of, (149) 1030
-corpuscle, red, extracellular relation of malaria parasite to, (27) **942**
-corpuscle, red, fragility of, (84) 89, (31) 556
-corpuscle, red, influence of venesection and subperitoneal injections of blood on, experimental study, (116) 560
-corpuscle, red, pathology of, **473**—ab.
-corpuscle, red, resisting powers of, not reduced in tuberculosis, (65) 1840
-corpuscle, red, Rouleaux formation by human, cause of, (17) **786**
-Corpuscle, White: See Leukocytes
-count, differential, (118) 1673
-count, differential, in dengue, (15) 1033
-count in appendicitis, (137) **1751**
-count, influence of radium on blood-pressure and, (152) 1502
-count, technic for, (84) 704
cryoscopy for determining kidney function, practical value of, ***188**
cultures, apparatus for use in, new, ***649**
cultures from sputum and, in lobar pneumonia, (22) **941**
BLOOD cytology, in passive immunity, (8) 243
diseases, (173) 1272
eclampsia an intoxication from excess of syncytium nuclei in, (174) **872**
effusion of, in spinal cord from indirect trauma, (140) 330
enzymes of, protective, as means of extracorporeal diagnosis, (89) 1396
examination, technic for, (134) 870, (98) 1929
findings in diphtheria, necropsy, (186) 1753
formation of new, at high altitudes, (97) **1749**
goiter with blood-picture, (49) 1839
in acute sulphuric acid and copper sulphate poisoning, (79) 792
in anaphylactic shock, **832**—E
in articular rheumatism, chorea, endocarditis and pseudochorea, (110) 705
in cancer with bone metastases, (27) 1109
in chicken pox, (187) 488
in croupous pneumonia, (111) 1030
in diphtheria, toxin in, (126) **1932**
in feces, tests for, (100) 1334
in lymphatic leukemia, (114) 560
in pellagra, (10) **1259**
in spinal fluid, (128) **706**
in tuberculosis, (74) **703**
in variola and vaccinia, (134) **560**
infection through mucous channels and, as alternative routes, (9) **1329**
injection in anemia, (125) **636**
interreactions in, from men and women, (87) **89**
intersexual reactions of, in horse, (41) 1926
iron in, (32) **556**
lepra bacillus in, (167) 869
loss at labor, safe limit of, (132) **1932**
loss, how much is compatible with survival in human being, **1886**
manganese, does it occur in? **674**—E
manganese normally in, (43) **866**
melena neonatorum cured by intramuscular injection of defibrinated human, (109) 1930
menstrual, why it does not coagulate, (102) 406
mercury index of, (58) **632**
methyl alcohol and, **1466**-E
nitrogenous bodies in, in cachectic infants, (51) 247
normal, constituents and methods of examination, **473**—ab
occult, chemical tests for, (78) 1327
occult, in feces, amebiasis and results of tests for determining, (91) **399**
occult, in gastro-intestinal tract, (67) **1036**
osteomyelitis, blood-borne, experimental research on, (78) **1840**
phosphorus content of, in normal and parathyroidectomized dogs, (43) 1665
platelet count, causes of, variation in, (23) 396
pneumococci do not proliferate in, in pneumonia, (25) 1926
-pressure, (114) 1116
-pressure after exercise as guide for estimation of labor capacity, (76) 792
-pressure and apoplexy, (86) 1262
-pressure and prognosis in laparotomies, **1737**—ab
-pressure and pulse in children between 6 and 14, (168) 1198
-pressure and pulse-rate in croupous pneumonia, value of studying, (103) 1397
-pressure, arterial and venous, effect of change of posture, without active muscular exertion, on, (2) **1979**
-pressure before, during and after operations under local and general anesthesia, **1737**—ab
-pressure, clinical significance of, (42) 1111 (85) 1262
-pressure, control by drugs, (94) 945
-pressure determination, (2) 163
-pressure during digestion, (43) **1191**
-pressure, effect of adrenal massage on, ***1777**
-pressure, effect of exposure of adrenals to Roentgen rays, (150) **1198**
-pressure, effect of strong purging on heart and, ***436**
-pressure findings, necessity for identical conditions in comparing, (56) 1497
BLOOD-PRESSURE, high: See also Hypertension
-pressure, high, and arteriosclerosis, (73) 1327
-pressure, high, and kidney disease, (88) **1403**
-pressure, high, and sugar content of blood, (81) 633
-pressure, high, arterial, (7) 1258
-pressure, high, general treatment, (4) **694**
-pressure, high, high-frequency current in, (3) 694
-pressure, high, in cardiorenal cases, management of, (131) 401
-pressure, high, in pregnancy, (35) **245**
-*pressure, high, of functional* or organic origin, (60) **248**
-pressure, high, permanently, sources of, (103) **635**
-pressure, high, restriction of intake of fluids in management of, (83) 1499
-pressure, high, treatment of confirmed cases of, (35) 1745
-pressure in children, (35) 1034
-pressure in diphtheria, (92) 1037
-pressure in venous system, rise of, during physical effort as functional test of heart, (83) 249
-pressure in chronic illness, (99) 161
-pressure in relation to viscosity, (50) 791
-*pressure, influence* of radium on blood-count and, (152) 1502
-pressure, minimal, as standard unit, estimation of, (52) 1332
-pressure readings, auscultatory method of, (98) 399
-pressure, reflex influences from gastro-intestinal tract on, (89) 1672
-pressure, systolic, determinations by various methods, accuracy of, and clinical use of diastolic pressure, (120) 1328
-pressure technic, (158) **1752**
-pressure technic, auscultatory, instrument for teaching, new, ***279**
-pressure, thyroid, influence on, (35) 1838
producing organs, disease of, (82) 1037
puerperal colon communis bacillus invasion of, (132) 252
purin bases in, (135) 92
regeneration in anemia, (167) 1502
relationship of animals as displayed in composition of serum proteins, (75) 161
serum, chemistry of, (44) **1261**
serum, human, for hemophilia, ***44**
serum, human, normal, in hemorrhagic diseases of infants and children, (106) 399
serum in syphilis, tabes and general paralysis, hemolytic properties of, (102) 1269
serum, lecithin, cholesterin and cholesterin esters in, (76) 703
serum, method of separating, **1381**
serum, pathology and reactions, **473**—ab
serums precipitated, for hemorrhage, (129) 242
skin diseases of blood-borne origin, pathogenesis of, (159) 1198
study of, (94) 1988
sugar content of, (96) **1672**
sugar content of, and abnormally high blood-pressure, (81) 633
sugar content of, and heat production, (41) 1984
sugar content of human, **1228**—E
sugar content of, in exophthalmic goiter, (103) 559
sugar in, during fever, (114) 1501
sugar in, in diabetes, (93) 1403
sugar in, technic of examination for, **1480**
-supply of brain, action of heat stimuli applied to skin on, (45) 2070
-supply of uterus, influence of extra-uterine pregnancy on, **1736**—ab
-supply of uterus, influence of myomas on, special reference to abnormal uterine bleeding, (85) **783**
-tests for identification of human, **390**
-tests for pregnancy, **309**, (88) **1396**
-tests, quantitative, (91) 1403
transfusion, (91) **89**—ab, (32) 317
transfusion after obstetric hemorrhage, (34) **245**
transfusion direct, (98) **250**—ab
transfusion in ruptured tubal pregnancy, (13) 860
transfusion, selection of donor for, **229**
transfusion, simple method of, ***435**
BLOOD *transfusion* with cannula, simplified, ***1284**
traumatic extravasation of, in joints and pleura, behavior of, (145) 561
tuberculosis bacilli in, (191) 563, ***995**, (107) **1038**, (126) 1116, (113) **1673**, (110) **1750**, (196) **1754**, (93) **1988**
tuberculosis bacilli in, in non-tuberculous, (75) **326**
tuberculosis bacilli in, in surgical tuberculosis, (105) **705**
tuberculosis bacilli in, none found in fifteen tuberculosis patients examined, (69) 1671
urea in urine and, constant ratio between, (42) **1400**
urea index in, (55) **324**
uric acid in, determination of, (56) **318**, (123) 329
venous, sequestration of, influence on pulse in heart disease, (76) **1194**
-vessels, action of iodin on, (100) **170**
-vessel anastomosis, cannula-forceps for, (41) 552
-vessels, closure of, after labor, (173) 562
-vessels, destruction of epinephrin and constrictor substances of serum by oxygenation in walls of, (96) 319
-vessels, dorsal auscultation of heart *and*, (123) **636**
-vessels, electric registration of movements of walls of, with pulse, (154) 708
-vessels, excessive functioning of viscera and morbid conditions of corresponding, connection between, experimental study, (71) 1113
-vessels, eye diseases and, (139) **243**
-vessels, grafting, **1474**
-vessels in beriberi, (24) 165
-vessels lesions in diabetes, (51) 1985
-vessel lesions, ulcer of stomach and, in relation to, (1) **1979**
-vessels, mesentery, obstruction of, experimental and clinical study of, (153) 1502
-*vessels, nerve lesion in certain* pathologic conditions of, indications of, (21) 1983
-vessels, occlusion of large, with strip of tendon fiber, (99) **793**
-vessels, peripheral, effect of general contraction of, on mouse cancers, (18) **1495**
-vessels, peripheral stasis, (27) **1838**
-vessels, pituitrin diuresis and, (56) 1922
-vessels, retina, central, effect of chronic glaucoma on, (35) 1028
-vessels, spleen, disease of, (172) 488
-vessels, surgery, (42) 789
-vessels, suture, (97) 559
-vessels, suture, technic for, (124) **329**, (130) 870
-vessels, suturing of, instrument as aid in, (76) 633
-vessels, transposition of large, (159) 1675
-vessels, uterus, atheroma of, metrorrhagia due to, (19) **695**
viscosity, (44) 1746
viscosity in exophthalmic goiter, (104) 559
viscosity in relation to arterial tension during pregnancy and puerperium, (88) 89
viscosity reduced in spontaneous gangrene, (113) **1404**
waste products in, **2050**—E
why it annuls toxic action of atropin, (178) **1753**
BLOTTING-PAPER test for acidity of gastric juice, (63) **1035**, (85) 1037, (143) 1338, (85) 1747
BLUMBERG'S sign in appendicitis, **616**
BOARD of examiners, writ of prohibition cannot be employed against, **1830**—Ml
of Health: See Health, Board of
BOILS, dilute sulphric acid administered internally for, (21) **1191**
BOLUS ALBA in sterilization of hands, (143) 1406, (51) 1585
BOMBAY presidency, radio-activity of some wells and thermal springs in Baroda state and, (22) 323
BOND gluten diabetic flour, **923**—P
BONE abscesses and sinuses, tuberculous, tuberculin in, (75) **1493**
abscesses, chronic, (124) 478
and muscle dystrophy, dwarf growth from, (74) 867
chisel resection of, (142) 485
clamp and bone plates, ***1698**
conduction of sound with normal hearing, (111) 635
cysts in long, solitary, (136) 1932

BONE, fractures of, articulations produced experimentally in, (48) **1497**
  fractures of, in face, typical, (113) 869
  fractures of long, (83) 1262
  fractures of long, operative treatment, (42) 240, (53) **627**
  grafting of muscle and, **1473**
  grafting without periosteum, **1900—C**
  grafts, (194) 873
  grafts and transplantation, (109) 1263
  growth and spinal bone transplant, experimental study of, ***1044**
  hemorrhage from, arrest by plugging with soft tissues, (15) **1105**
  leukocyte count in osteomyelitis and tuberculosis of, in children, diagnostic significance of, (19) **1492**
  marrow and blood changes in infantile scorbutus, (57) 1498
  marrow, chicken, growth of, in vitro, its bearing on hematogenesis in adult life, (50) **241**
  marrow metastases and anemia in stomach cancer, (27) **788**
  marrow, puncture of, in diagnosis, value of, (115) 560
  metastases, blood in cancer with, (27) 1109
  negative pressure in, long, in dog, (127) 485
  or periosteum flap for gap in skull or dura, (83) 168
  osteomyelitis of long, localized, (13) **1577**
  -plates, Lane, in seventy-six operations, (23) **551**
  -plating, dont's in, (85) 477
  -plating in irreducible fracture of clavicle, (30) 81
  -plating, method of, ***1698**
  reflexes, diagnostic importance, (64) **404**
  reformation of, after resection, (17) 1830
  regeneration, (82) **483**
  regeneration, growth and death of, ***983**
  sarcoma of long, surgical treatment, (57) **88**
  -saws, circular, two new, ***1285**
  sunlight in disease of, **1916**—ab
  syphilis of joints and, in children, (27) 1496
  tibial, transplantation in postoperative mastoid wound, (49) **862**
  transplantable tumor of fowl producing cartilage and, (46) **1261**
  transplantation, nose entirely restored by rhinoplasty and, ***728**
  transplantation, osteomyelitis with, ***2030**
  tuberculosis and trauma, **1917**—ab
  tuberculosis of joint and, (118) **329**, (41) 480, (89) **1988**
  tuberculosis of joint and, experimental study, (30) **942**
  tuberculosis of joint and, in children, types of organism in series of, (3) **1494**
  tuberculosis of joint and modern treatment, (69) 482
  tuberculosis of joint and, special institutions for treatment and care of, necessity for, (43) 2070
  tumors, (53) 1833
  tumors of thyroid origin, (95) **869**
BOOKS, medical, as evidence, **1731**—Ml
  medical, new, committee to pass on, suggestion for, **1901—C**
  medical, plea for uniform size of, (64) **2071**
  needed by Dayton physicians to replace those destroyed by flood, **1800—E**, **1810—C**
BORDET-GENGOU bacillus in relation to lesion of whooping-cough, (49) **1187**
BOTANY and medicine, **374—E**
BOTRYOMYCOSIS, liver, human, (41) 1832
BOTTLE exercise for lungs, **459**, (56) **631**
  holder for feeding babies, new, ***1535**
BOTULISMUS poisoning, (129) 706
BOUGIE in abdomen removed ten weeks after introduction per vaginam, (3) 396
BOUILLON culture of staphylococcus pyogenes aureus in diphtheria convalescents and bacillus carriers, use of, (58) **783**
BOWEL: See Intestine
BRACHIAL PLEXUS, blocking the, (92) 1672
  injury of nerves from blocking, (77) **2072**
  neuritis and polyneuritis following pneumonia, (91) **704**
  neuritis, symmetric, primary; as symptom of tardy syphilis, (114) 407
  paralysis of diaphragm after anesthesia of, (186) 1197
  paralysis of phrenic nerve after blocking of, (156) **1675**
  supraclavicular anesthetization of, (9) **945**
BRADFORD anthrax investigation board, **1008**
BRADYCARDIA due to liver injury, (135) **1501**
  of lead colic, (78) **867**
BRAIN: See also Cerebellum; Cerebrum; Dura Mater; Hypothesis Cerebri; Pineal Gland; Skull
BRAIN abscess and sinus thrombosis, differential diagnosis between, treatment, (73) 242
  abscess, extradural, complicating frontal sinusitis, (108) 1328
  abscess in frontal lobe, (63) 241
  abscess, metastatic, after suppuration of bronchial lymph-node, (81) 704
  abscess of otitic origin based on study of twenty-four cases, (16) 81
  abscess, otogenic, (73) 1927
  aneurysm of artery in, perforation of, diagnosis, (163) 562
  blood-supply of, action of heat stimuli applied to skin on, (45) 2070
  bullet passes through, without apparent injury, (102) 1114
  cerebrocerebellar, diplegia of, infantile, (1) **2066**
  chemical research on, **597—E**
  development, morphologic changes in nose and face due to, (7) 81
  endothelioma of frontal region of, large, (5) **1663**
  epidermoid cholesteatoma of, (118) 1270
  forms of mind disease in cases with no gross lesions in, at autopsy, (17) 551
  functioning of, (165) 1502
  glioma in frontal lobe, large, (46) 1926
  hemorrhage, and blood-pressure, (86) 1262
  hemorrhage, diagnosis by rachicentesis, (47) **1741**
  in catatonic hirntod, (3) **1663**
  in training muscles, participation of, (57) 632
  lesions, localization of, advances in, (28) 1105
  lesions, nodular hyperplasia of liver associated with, (127) 1270
  Meltzer's insufflation anesthesia in respiratory paralysis during operations on, (52) **1926**
  normal-looking, in insane subjects, series of, (4) **1663**
  of albino rat compared at birth with that of fetal pig, (90) 1327
  operations on, neurologic indications for, (151). 486
  sarcoma of left frontal lobe, ***30**
  spirochaeta pallida in, in general paralysis, (143) **626**, **1002—E**, (61) **1188**, **1650**
  sulphatid of, (54) 318
  surgery, (29) 86, (16) 323
  syphilis, recovery after use of salvarsan, ***1296**
  tumor, (163) 487 ***1280**
  tumor, after history, ***1418**
  tumor, cerebellopontine angle, (52) 1746, (140) 1750
  tumor, cerebellopontine angle, diagnosed and located three years before death, (76) 1396
  tumor, colloid, of third ventricle, death due to, (18) **479**
  tumor, eye disturbances with, (117) 794
  tumor, gaping of sutures of skull from, (76) 867
  tumor, growth and survival period of, records of 500 cases, special reference to pathology of gliomata, (9) 629
  tumor of base of, immediately behind hypophysis cerebri, **1023**—ab
  tumor, opening up fourth ventricle and resection of vermiform process for, (78) **1113**
  tumor, operation, autopsy findings, (38) 398
  tumor, removal of, under local anesthesia, (115) 1269
BRASS founder's ague, industrial brass poisoning, (9) 1738
BREAD, **50—E**
  clean delivery of, **844**
  digestible, and newspaper fakes, **521—E**, **1379—C**
  fresh, forty hours old, **1712—E**
  fresh vs. stale, (2) 629
  from bolted flour and from entire wheat flour, **925—C**
  supply, diphtheria epidemic traced to, **380**, (56) 1266
  wrapping of, validity of statute and board of health rule as to, **1490**—Ml
BREAST cancer, (71) 1922
  cancer affecting both axillae and, recurrent, extensive, complete eradication, (22) 241
  cancer, clinical diagnosis, (96) 242
  cancer, 534 operations for, ***795**
  cancer, potential, (10) **158**
  cancer, recurrent, local, problem in, **1252**—ab, (52) 1982
  cancer, roentgenotherapy in inoperable primary, (67) 1493
  cancer, secondary growths in, (11) 322
  cancer, skin-grafting operation for, developments in, ***416**
  care of, during pregnancy and lactation, (15) 396, (102) 1029
  fibro-adenoma of male, (12) 86
  hypertrophy, (177) **1676**
  internal secretion? (100) 950
  Nipple: See Nipple
  Nursing: See Infant, Breast Feeding
  plastic operations on, (72) **703**
  roentgenotherapy of, cancers and myomas of genitals and, (87) 1841
  sarcoma in male, (142) 330
  secretions of ovary and, internal, interrelations between, (124) **706**
  secretory activity in, independently of pregnancy, (10) 164
  supernumerary, (99) 406
  surgical importance of, (125) **1836**
  swelling in, differential *diagnosis*, (47) 631
  tuberculosis, (15) 625
  tumors in men, (56) **1985**
  tumors, malignant, diagnosis and removal, (49) 477
  tumors, non-malignant, (63) 632
  tumors, special reference to cancer, (17) 239
BREATH, expired, organic matter in, its inhibiting power on oxidizing ferments, (34) **626**
BREATHING, abnormal, and malocclusion, (42) 696
  exercises by means of a bottle, **459**, (56) **631**
BREECH, delivery by, technic, (14) 1324
  presentation, causes and management of, (176) **873**
BREITENBUSH Hot Springs, report on, **1548—E**
BRILL'S DISEASE: See also Typhus Fever
BRILL'S DISEASE, (31) 781
  in Michael Reese Hospital, (55) 398
BRINE-SOLUBLE compound in cheese, composition and properties of, (85) 1327
BRITISH government committee on nostrums, **1238**
  government inquiry into sale of nostrums, **1970**
  Guiana, sanitation at, (7) 1397
  Journal of Surgery, **1372**
  Medical Association and national insurance act, **760**
  Medical Association, annual meeting, **1805**
  Medical Association releases physicians from pledge in regard to national insurance act, **458**
  medical practice act, **1903**
  scientific journal, nonsense in leading article on nutrition in, **1642—E**
BRISTOL medical library, (14) 401
BROAD LIGAMENT, puerperal lesions in uterus adnexa and, (103) 90
  temporary sterilization of women by walling off ovary with, (92) **1748**
BROMIDS, dosage of, in water, (35) 700
  in epilepsy, (119) 329
BROMIN in genuine epilepsy, pharmacologic basis for, (80) 1037
  ions, pharmacologic action of, on metabolism of purins, (101) 170
BRONCHITIS, acute, traumatic, (107) **484**
  capillary, (123) 1328
  chronic, and emphysema, (88) 1587
  endobronchial treatment of asthma and, (135) **408**
  herpes zoster complicating pneumonia or, (147) 1502
  restricting intake of fluids in, (65) 404
  vaccine therapy in chronic, (8) 945
BRONCHOMYCOSIS, (28) 1400
BRONCHOPNEUMONIA: See also Bronchitis
BRONCHOPNEUMONIA, (123) 1328
BRONCHOSCOPY and esophagoscopy, (38) 1492
  upper, for nail occluding third bronchial ramus, recovery, (135) 1030
  upper, probable tumor of lung diagnosed by, (41) 943
BRONCHOSTENOSIS, diagnosis, (118) 870
BRONCHUS, cancer of larger, primary, (22) 1259
  dysenteric abscess of liver perforating into, (61) **1111**
  dyspnea from spasmodic contracture of musculature of, in spasmophilic diathesis, (131) **1196**, (120) **1931**
  fistula between esophagus and, with aortic aneurysm, (89) 1114
  foreign body in, (83) 1667
  importance of, from mechanical standpoint, (122) 1115
  lymph-nodes, enlarged, diagnosis, (1) **80**, (99) **250**
  lymph-nodes, suppuration of, metastatic abscess in brain after, (81) 704
  pin embedded in, extraction of, (51) 1746
BROWN modification of Hodgen's splint, for fractures, **1248**—ab
BROWNIAN movements are due to microorganisms, (154) 1198
BRUSSON gluten bread, **922—P**
BUDAPEST letter, **761**, **1089**, **1972**
BULGARIAN yoghurt, history of, its predecessors in antiquity, (186) 488
BULLET, extraction of, under roentgenoscopy, improved technic for, (103) 1588
  passes through brain without apparent injury, (102) 1114
  Wound: See Wound, Gunshot
BULLETINS, county society, (66) 398
  medical, University of Missouri, **760**
BUREAU of Medicine and Surgery, organization and finances of, (150) 479
BURNAM'S test for formaldehyd in urine, ***662**, (32) **1740**
BURNS, (87) **483**
  anaphylaxis, cause of death from, **289—E**
  eyeball, due to caustic contents of golf-ball, ***1297**
  grafts of preserved amniotic membrane, ***973**
  open treatment for, **617**
  Roentgen-ray, (115) 328, (93) **869**
BURSITIS, subdeltoid, traumatic, acute, ***1224**
BURTON, his forceps and his foes, (10) 946, (20) 1033
BUTTERMILK, method of making, **1015—C**, **1244—C**
BUTTON in gastro-enterostomy, advantages of, (68) 702

C

CABOT'S findings and Croftan's criticisms of pitfalls in diagnosis, **386—C**, **464—C**
CAFFEIN, actions of, (79) 697
CAISSON DISEASE, (77) 1580
  acute effects on aeropathy, (12) **1259**
  late manifestations of, (13) 1258
CALCIFICATION in subcutaneous tissue, multiple, (1) **1189**
CALCIUM, anaphylaxis in relation to, (34) **1106**
  and phosphorus metabolism in two boys, (65) 2071
  balance, dependence of, on intake of alkali, (108) 705
  caseinate, basic, and paracaseinate, preparation and composition of, (82) 1327
  chlorid, salt perfusion of respiratory center in frogs and effect of potassium chlorid and, (57) 1922
  excretion, excessive, through feces in infantilism, causes of, (48) 240
  for growth, importance of, (112) 1501
  glycerophosphate, **45**
  hypochlorites in water purification, **211—E**, **466**, (60) 1107, **1480**
  in therapeutics, (112) 1673
  inorganic metabolism in pneumonia with special reference to magnesium and, (52) **241**

CALCIUM metabolism and etiology of rachitis, (101) **1403**
metabolism and tuberculosis, (98) 1749
metabolism of nitrogen, fat and, in infants, (70) 1986
metastasis and calcium gout, (78) 633
retention by swine, effect of high magnesium intake on, (71) 1028
salts abstracted from mother's blood by fetus, cause of rapid progress in tuberculosis, (6) 1831
CALCULUS formed in bladder around thermometer, (65) 558
Gall Bladder: See Gall Bladder, Calculus; Cholelithiasis
in common duct of liver, (86) 1107
intestinal (6) 1743
Kidney: See Kidney Calculus; Nephrolithiasis
pancreas, (137) 1406
seminal, simulating nephrolithiasis, (98) 1262
Ureter: See Ureter, Calculus; Urolithiasis
urethra and periurethral, (72) 944
urethra, in bilharziasis, (145) 1674
uric acid, (114) 1030
vesical, (64) 1580
CALENDAR, shall it be reformed? **291**—E
CALIFORNIA medical news, **375**, **454**, **526**, **839**, **1083**, **1368**, **1467**, **1647**, **1802**, **1967**
state board April report, **1825**
state board December report, **620**
taking the cure in, (94) 1494
CALOMEL ointment in venereal prophylaxis, ***1610**
CALORIMETRY, animal, (52) **318**
CAMMIDGE Reaction: See Reaction, Cammidge
CAMPHOR in experimental bacterial infection, (85) **1929**
in pneumonia, (98) **1672**
intravenous injection of saturated solution of, in pneumonia, benefit from, (122) 1501
poisoning, (149) **330**
therapeutic value of, (9) **624**
CAMPHORATED OIL: See Oil, Camphorated
CANADA medical news, **1471**
CANADIAN Public Health Association, **1472**
CANAL ZONE, acute arthritis, among negro laborers on, 100 cases, ***1065**
disease prevention in, **610**—ab
health in, obtained at cost of one cent a day for each citizen, **1082**—E
Medical Association of, meeting of, **1311**
practice of medicine in, (82) 629 ***806**
sanitation in, **852**, ***953**, (7) 1397
sanitation in, and sanitation in tropics generally, **1569**—ab
CANCER: See also Tumor, Malignant
CANCER, (85) 242, **1102**—ab, (39) 1579
abdomen, diagnosis of, possible errors in, and plea for exploratory laparotomy, **1574**—ab
action of intravenous injections of various substances in animal and human, **2022**—ab
ampulla of Vater, (56) **1332**
animal, intravenous injections of various substances in, ***1857**
antimeristem-Schmidt serum for, **766**—P, **1244**—P
antitrypsin content of blood with pregnancy and, (174) 562
appendix, (28) 402, (100) 559, (56) **1927**
appendix, lipoid content of, (82) 792
autolysis in, **228**
bladder, high-frequency current for, (130) 320
bladder, of syncytial structure in young man, (151) 1674
blood in, with bone metastases, (27) 1109
breast, (71) 1922
breast and axillae, recurrent, extensive, complete eradication, (22) 244
breast and genital roentgenotherapy of myomas and, (87) 1841
breast, clinical diagnosis, (96) 242
breast, 534 operations on, ***795**
breast, potential, (10) **158**
breast, recurrent, local, problem in, **1252**—ab, (52) 1982
CANCER, breast, roentgenotherapy in inoperable primary, (67) 1493
breast, secondary growths in, (11) 322
breast, *skin-grafting operation* for, developments in, ***416**
breast tumors with special reference to, (17) 239
bronchus, primary, (22) 1259
campaign against, **299**
cecum, diagnosis, (34) 1187
cells and normal cells, comparative studies on, (20) **1578**
cells, development of, (152) 92
chemical treatment, (84) 327
coagulation by electricity as adjuvant in operative treatment of, (77) **1193**
Coley's fluid in, **228**
colloid copper in, (35) 1496
colon, (6) 864
deported tissue cells as possible source of, (113) 90
diagnosis, early, importance of, (133) 401
diagnosis, peptolytic power of gastric juice and saliva in reference to, (19) **158**
educating American women concerning, best methods, **1738**—ab
educaton of people in what to do in early cases of, **2020**—ab
embryonal cells cause of, (122) **636**
eosinophilia, intense, in lympho-*granuloma and, (169) 562*
epiphanin and meiostagmin reactions in diagnosis of, (46) **1921**
esophagus, early diagnosis, with new technic of Roetgen-ray examination, ***1283**
esophagus, from standpoint of intrathoracic surgery, (142) 162, (43) **948**
esophagus, method of treating, (21) 1664
esophagus resected in thoracic portion for, successful, **1252**—ab, ***1533**
esophagus, surgical treatment, (60) 1742
etiologic factor in, its possible influence on treatment, (14) **1980**
etiology, newer ideas on, (88) **783**, (41) **1579**
excision, early, can number of cures be increased by, **2019**—ab
fallopian tube, (39) **1745**
ferments, recent experimental work with, (114) 1923
fetal autolysates for, Fichera's method of preparing, **228**
fibromatosis of stomach in relation to ulcer and, **2022**—ab
genital, primary, multiple, in women, (74) 1747
genito-urinary tract of workers on synthetic dyes, (65) **632**
grafting and traumatic dissemination of, in operations for malignant tumors, ***512**
heart sign in, experience of, (2) **2067**
hospital, roetgenotherapeutic department at, **916**
hyperplastic hypophysis, (94) 1667
hypothesis as to origin and prevention of, (118) 1264
in cardia, transpleural resection of, successful, (101) 1500
in mice, inheritability and incidence of, **2020**—ab
increase of, appalling, **1894**
induced in rats by feeding with nematodes, (94) 1748, (130) **1844**
induced in rats by feeding with parasites of cockroaches, (52) **948**
Information Committee, **1103**—ab
inhibition of hemolysis by serum of individuals with, (49) **627**
inoculability of, **1173**—C
inoperable, treatment, (25) 631, (132) 870, (83) **1113**, (44) 1670
inoperable, treatment of, or after operations, (79) **1267**
intestine, early diagnosis, (82) 1494
intestine, lower, palliative operations for, (56) 1192
irritation and, **188**—ab
jaw, upper, removal of, technic for, (34) 2069
jejunum and ileum, (142) **1338**
kidney, transplantable, of white rat, (20) **787**
larynx, laryngectomy for, (80) 399
liability to, may be considered as result of injuries, **235**—Ml
lip, lower, surgical treatment, (118) 478
CANCER, liver in male infant of seven months, (73) 1333
liver, mineral elements in, (59) 867
liver or pancreas, (42) 631
lung, (50) 782, (61) **2071**
menace of, **1735**—ab.
menopause hemorrhages and prophylaxis of, (143) **637**
mesothorium rays and Roentgen rays in, **1972**
metals in, (80) 1402
metastatic, Bence-Jones proteinuria associated with, (33) 159
metastatic, in skin, (183) **1753**
mortality from, in Prussia, (53) 1985
mouse, catalase content of liver and blood with, (124) 91
mouse, effect of general contraction of peripheral blood-vessels on, (18) **1495**
mouse, group of mice with exceptional resistance to, (52) 1187
mouse, no appreciable influence from mercury on growth of, (136) 1674
nose and accessory cavities, nine operative cases, (71) 1927
Odin's alleged discovery of germ of, **463**—P
operations for, how can we improve results? (87) 783
pain and, **259**—ab
papilla of Vater, (12) 1104
present status of, (110) 1263
prevalence and mortality of, **67**—C
prevention and cure of, (59) 1742, (26) **2067**
problem, (77) 633, **1250**—ab, (81) 1494
prophylaxis of, (167) **562**
public education in, **1912**—ab
radiotherapy of, (76) 249, (170) 872, (132) 1116, (144) **1197**
radiotherapy of, superficial, ***1694**
rectum, (70) 867, (51) **1265**, (140) 1406
rectum and colon, irremovable, appendicostomy instead of colostomy for obstruction due to, (3) **555**
rectum, combined operation for, (55) **1192**
rectum, diagnosis and treatment, (14) 630
rectum, intramural spread of, (3) **1108**
rectum, two patients surviving many years with, simple and successful method of dressing inguinal anus, ***1418**
report of four years' work on, (22) 1395
Research, American Association for, **2019**—ab
research institute, **1911**—ab
roentgenotherapy, about eye, (46) 1580
Russian Uterine Cancer Commission, report of, (117) 1038
Salkowski and Kojo urine test for, diagnosis of, (80) 1499
serodiagnosis of, (122) 481, (69) 867, (120) **1116**, (52) **1585**, (86, 97) 1588, (56) **1839**, (103) **1842**, (31) 2069
sigmoid flexure and ampulla of rectum, diagnosis of, early, (75) **949**
Skin: See Epithelioma
skin reaction, (34) **159**
society to fight, **1969**
statistics, **1912**—ab, **2021**—ab
stomach, (65) 783, (81) 1743
stomach, analysis of 200 cases, (11) **1190**
stomach and duodenum, gastric juice in, (19) **1924**
stomach, bone-marrow metastases and anemia in, (27) **788**
stomach, bound chlorin in gastric juice with, (92) 1403
stomach, cerebral syphilis in previously latent, simulated by metastasis in spine and meninges, (41) 557
stomach, clinical and post-mortem findings in, discrepancy between, (151) 1329
stomach, combined with tuberculosis of, partial gastrectomy performed in, (5) **1738**
stomach, diagnosis, early, (72) 1580, (2, 69) **1982**
stomach, dissolved albumin test for, (66) 1666
stomach, hemophilia developing in course of, (45) 324
stomach, operative treatment, (46) **1192**
stomach, roentgenotherapy of, extensive exposure for, (153) **1751**
CANCER, stomach, tryptophan test for, unreliability of, (139) 252, **907**—E
stomach ulcer and epigastric hernia with, frequency of, (34) 700
stomach ulcer as a frequent precursor of, (29) 244, (15) **1919**, (8) 2066
surgical pathology of, **1251**—ab
surgical treatment, general principles, **1251**—ab
testicle, (185) 488, (41) 402
thyroid, (61) 1927
thyroid, effects of iodin in, (19) *1259*
tongue, (18) 1264, (14) **1399**
tongue, under age of thirty, (85) **1500**
treatment, literature on, **228**
urethra, (188) 873
uterus, (125) 242, (62) 1742
uterus, abdominal radical operation for, (91, 92, 93) **1262**, (99) **1263**
uterus, after menopause, (91) 868
uterus, campaign against, (77) **168**, (126) 251
uterus cervix, cautery in radical treatment, (94) **1263**
uterus cervix, curability of, (54) 552
uterus cervix, cystoscopy in determining operability of, (33) **788**, (52) **1111**
uterus cervix, extended vaginal operation for, (95) 1262
uterus cervix, laparotomy for, (52) 782
uterus cervix, operation for, care of wound, (186) 563
uterus cervix, Wertheim operation *for, results after, (96)* **1263**
uterus, exotic flora of, in relation to fibroids and, (1) 699
uterus, in non-pregnant and pregnant women, (89) 697
uterus, mortality from, how may we reduce? ***968**
uterus, operative indications with, (40) 1926
uterus, roentgenotherapy of, (140) **92**
uterus stump, (192) **1754**
uterus, *tardy recurrence of, (65)* **1498**
uterus, urinary apparatus as guide to operability of, information to *be derived from, (90) 1500*
vagina, primary, (58) **1111**
vanadium selenium in, (97) 399
vulva, (179) 873
worry and, **741**—ab
CANNED goods, new rule announced for, **1660**—Ml
CANNULA for blood-transfusion, ***1284**
forceps, for blood-vessel antastomosis, (41) 552
CANTHARIDIN poisoning, experimental, kidney lesion of, (25) 1578
CAPPARIS tweediana eich, chemical study of South American plant, (155) 92
CARBOHYDRATE, double function of fats and, in nutrition, nutritive properties of, **548**—ab, (92) **629**
hypophysis in metabolism of, (59) **696**
in diabetes, ***1410**, (91) 1672
metabolism, disturbances of, in pregnancy and eclampsia, (105) **1269**
metabolism in anemia, (117) 560
metabolism, liver, pancreas and, (80) 1113
CARBON dioxid and apnea, **999**—E
dioxid and circulation, **451**—E
dioxid and malaria, (156) **708**
dioxid eliminated with lung emphysema, proportion of, (126) 560
dioxid, inhibiting action of, on hemolysis and bacteriolysis, (41) 866
dioxid, nevus maternus removed by, **1813**
dioxid, passage of, *from mother to* fetus, (56) 867
dioxid snow, *cauterization* with, technic for, (32) 1583
dioxid, solid, in nevus, (48) 160
dioxid *tension* in alveoles, technic for determining, (51) 791
monoxid in blood, demonstration of, (185) 1272
monoxid may be cause of headaches and anemia, **1883**—E
monoxid poisoning, ***737**
monoxid poisoning cause of anemia in city infants, (67) **1112**
monoxid poisoning of woman eight months pregnant and of fetus, (56) 1111
CARBONATED beverages, regulation of manufacture and sale of, **63**

CARBUNCLES, colloid mercury for, (13) 555
  dilute sulphuric acid administered internally for, (21) **1191**
CARCINOMA: See Cancer
CARDIOLYSIS, (1) 243, (7) 1982
  in certain affections of heart, **316**—ab
  in mediastinopericarditis, (15) 239
CARDIORENAL Diseases; See Heart and Kidney
CARDIOSPASM and iodiopathic dilatation of esophagus, (48) 862
CARDIOVASCULAR and renal disease, **518**—T
  disease, diet in, (53) **1497**
  disease in children, (43) 557
  disturbance and skin diseases, (15) 1923
  disturbance, Karell's method of treating, (115) **1501**
CARDS for case records, **1248**
CARIES, dental, a streptomycosis, (86) 793
  dental, and general pathology, (54) 1034
  dental, and school inspection, (57) 696
CARNEGIE, Vanderbilt University receives one million dollars from, **1801**—E
CAROTID artery, aneurysm of, (49) 557
  artery, internal, anomalous, (42) 1492
  artery, internal, anomalous, clinical significance in tonsil operations, ***172**
  artery, ligation of, (77) 1333
  artery, occlusion of common, by metal band, (14) 1032
  gland, (115) 951
  gland, tumor of, (108) **484**, (121) **1843**
  region, anatomy of, (53) 557
CARPUS, dislocation of, (117) 1589
  dislocation of radius and, complete, dorsal, traumatic, (85) 1396
CARREL, Alexis, work of, **540**, (53) 631
  articles on preservation of living tissues outside organism, **1560**
  solution, formula of, **1977**
CARRIERS, bacillus, bouillon culture of staphylococcus pyogenes aureus in diphtheria convalescents and, (58) **782**
  diphtheria, (5) 1918
  diphtheria, staphylococcus-spray treatment of, **1544**—E, ***1876**, (23) **1919**
  disease, common house roach as, (33) 695
  infection, early reference to, **1547**—E
  poliomyelitis virus found in nose secretion of, ***1611**
  typhoid, ***183**, **222**—ab, (54) 477, (80) **634**, (171) 1676
  typhoid, chronic, surgical method of clearing up, ***1293**
  typhoid, prize for means to cure, **1804**
CARTILAGE, family of dwarfs from defective development of, (58) 1193
  necrosis of, arthritis deformans due to, (53) 948
  rib, transplantation into pedunculated skin flaps, (34) **1325**
  semilunar, of knee-joint, injuries to, (14) 1495
  transplantable tumor of fowl producing bone and, (46) **1261**
  transplantation of piece of, into septum to prevent perforation after submucous resection, (82) 399
CARTOONS, health, using without credit, **1245**—C
CARUNCLE, urethra, large, in girl of nine, ***1281**
CASE-record and history blanks or cards, request for, **689**
CASEIN, ash-free, and paracasein, method of preparing, (81) 1327
  curds in feces of infants, pathogenesis of, (3) 2066
  dried artificially, preliminary investigation, (36) **1741**
  fever-producing property of, (101) 1037
  molecules and molecular weights of paracasein and, valency of, (84) 1327
CASEINATES and paracaseinates, unsaturated or acid, preparation and composition of, (83) 1327
CASS County Medical Society, history of, (103) 1835
CASTOR OIL an oxytocic? **1481**
CASTOR OIL, how to give, **1174**, **1320**
  in appendicitis, (125) **1196**
CASTRATION: See also Asexualization; Sterilization, Unfit; Vasotomy
CASTRATION, adrenals, changes in, in pregnancy and after, (71) 1747
  behavior of opsonins and agglutinins in animals after injection of extract of testicles or (141) 252
  hypothesis cerebri during pregnancy and after, in women and animals, (73) 482
  resistance to strychnin after, increased experimental, (94) **169**
CASTS of feet rapid and accurate method of taking, **1916**—ab
CATALASE content of liver and blood with mouse cancer, (124) 91
CATALOGUE, international, of incunabula, proposed, **1989**—E
CATAPHORESIS, therapeutic, for infectious cornea processes, special advantages of, (58) 1586
CATARACT and Smith operation, (64) 1396, (62) 160
  dionin in, **69**
  extraction in capsule operation, another view of, (13) 1664
  extraction, large incision in, (87) 1580
  extraction, 150 consecutive cases, (7) 629
  intracapsular operation for, after method of Stancleanu, (99) 1923
  Krönlein operation for, simplification of, (84) 1580
  operation, (32) 2067
  operations, capsule after, method of dealing with, (83) 1580
  operations, control of eye in, (26) 1669
  operations, death after, (15) 1739
  operations, intracapsular, from viewpoint of assistant, (71) 1396
  operations, lens extraction in capsule in, (27) 1669
  polariscope findings in, (77) 1586
  senile, chemistry of, (31) 397
  work, general anesthesia in, (72) 242
CATARRH, chronic, from enlarged tonsils, (115) 407
  deafness due to, prevalence of, economic consideration of, (115) 1328
  nasal, acute, due to gram-negative bacillus resembling "distemper" group of organisms, (24) 244
CATASTROPHE, ultimate, **1241**—ab
CATGUT, (126) 870
  iodized, method for preparing, articles on, **1175**
  picric acid and oil of cloves preparation of, (157) 162
  sterilization of, **1904**
CATHA edulis, pharmacologic action of, and its alkaloids, (62) 1188
CATHARTICS in surgery, (69) 1107
CATHETER, duodenal, findings with, in infants, (95) **1114**
CATHETERIZATION, retrograde, in ruptures of urethra, (52) 696
  ureters under direct visual inspection, (39) 166, (45) 701
  with carbon dioxid snow, technic for, (32) 1583
CATTLE, tuberculosis antibodies produced in, **1801**—E
  vaccination of, against tuberculosis, (34) 1330
CAUDA EQUINA, nerves, disease of, peculiar and undescribed, **1819**—ab
  tumors of conus and, **1909**—ab
CAULS, pseudoperitoneal, of colon, **237**—ab
CAUSTIC pastes, sulphuric acid, ***434**
CAUTERY, conical cornea treated by actual, (34) 1028
  in cancer of cervix uterus, radical treatment, (94) **1263**
CECOTOMY for removal of hairpin impacted in ascending colon, (20) 479
CECUM adhesions, **1389**—ab
  atony of, (24) **1027**
  bladder formation out of, (130) 252
  cancer, diagnosis, (34) 1187
  digestive troubles due to disease of, **1473**
  dilatation and inflammation around ascending colon, disturbance from, (18) 2069
  functional nature of appendix and, (17) 86
  inflammation, primary, (76) 1927
  mobile. Lane's kink and Jackson's membrane, etiology of, (78) **1396**
CECUM, movable, and pericecal membrane, **148**—ab
  pathologic conditions of terminal ileum and, symptoms and diagnosis, (153) 1031
  torsion, operative treatment, (65) 482
  tuberculous ulcer of ileum and, (33) 1106
  ulcerations and perforations of small intestine and, from postoperative intestinal infection, (54) 867
  volvulus of, intestinal obstruction, acute, due to, (25) **556**
CELIAC affection, (11) **1582**
CELIOTOMY and splenectomy in floating spleen with twisted pedicle, (7) **158**
CELLS, chemistry of, (49) 1985, (88) 1929, (26) 2069
  embryonal, cause of cancer, (122) **636**
  protoplasm of, (108) 794
  reaction in rats, (145) 1270
CELLOIDIN paraffin method for embedding and handling tissue, (64) **1262**
  sections, rapid method for, ***363**
CELLULITIS, appendicitis complicated by spreading, of obscure clinical and bacteriologic nature, fatal case, (11) 1668
  orbit, (71) 1493
  pelvis, (75) 1327, (4) 1923
  pelvis, following Wertheim's operation, (56) **247**
CENTENARIANS and nonagenarians, (111) 698
CENTRAL America no longer a menace, **1471**
CEREBELLUM: See also Brain
CEREBELLUM abscess and afebrile sinus thrombosis complicating acute otitis media in adult, (87) 399
  abscess and labyrinthitis, differential diagnosis, (89) 84
  comparative anatomy, topography and function of, (86) 1672
  glia cysts, (117) 483
  localization in cortex of, (113) 407
  removal of, in congenital occipital hydrencephalocele, (65) **1193**
  topography (80) 1113
  tumor, (4) **163**
  tumor, (glioma), operation, recovery, (51) 1921
  tumor, operation for, (69) 249
CEREBROSPINAL FLUID, (37) **1331**
  albumin reaction in, effect of spinal cord compression on, (50) **324**
  analysis of 426, from pathologic conditions, ***811**
  arsenic in, examination of, following administration of salvarsan, (69) **241**
  blood in, (128) **706**—ab
  composition of, (74) 558
  disease of meninges, (92) 1500
  in latent syphilis and under salvarsan, (117) 1269
  in syphilis, (56) 1746
  isolated antibody in, (26) **475**
  serodiagnosis of syphilis applied to, (114) 1335
  spirochaeta pallida in, demonstration of, ***108**
  technic for examination, (191) 563
  yellow, (148) 561
CEREBRUM: See also Brain
CEREBRUM abscess, idiopathic, (13) **2068**
  abscess originating in ear, (135) 706
  abscess, symptomatology of, diagnosis and indications for surgical intervention, (2) 474
  Hemorrhage: See Brain, Hemorrhage
  lesions, prolonged pregnancy in relation to feeblemindedness and, (15) 158
  localization of lesion, from ophthalmic standpoint, (62) 783
  surgery, (142) 1329
  symptoms in child of ten years, unusual, (76) 1580
  symptoms under salvarsan, (124) 1673
  syphilis, (107) **1500**
  syphilis, prognosis and therapy of, ***1852**
  tumor and hemorrhages, localization and removal of, consecutive displacement of cerebral hemisphere in, (22) 1324
  tumor causing pseudo-eclampsia, (29) **1745**
  tumor, hemiplegia gradually developing, due to, (54) 1107, (140) 1329
CEREBRUM tumor, subcortical, tuberculous in nature, operation, recovery, (29) 1109
  ventricles, air in, following fracture of skull, **1024**—ab
CERTIFICATE, holder of, failing to have it recorded, **1182**—Ml
  revocation, summary annulment of, reversed, **1490**—Ml
  unlawfully practicing medicine without, court affirms conviction of, **1908**—Ml
CERVICAL RIBS and operative measure to prevent recurrence of symptoms, (103) **1263**
  excision of, technic of, (19) 1583
CESAREAN SECTION, (2, 3) **158**, (8) 691, (8) **1032**, (18) 1185, **1390**—ab, (128) 1836, (24) 2067
  abdominal, (170) 562 (126) 1673
  abdominal, in eclampsia, (32) **1186**
  abdominal, in eclampsia and central placenta praevia, (64) **944**
  abdominal, indications for, (76) 1327
  abdominal, indications for, with technic of operation and analysis of 352 cases, (77) 1107
  and panhysterectomy in elephantiasis of vulva, (14) 479
  and Porro cesarean section (40) 210
  extraperitoneal, (61) 791
  extraperitoneal, suprasymphyseal, advantages of, in clean as well as presumably infected cases, (19) 1185
  gastrectasis following, (4) **158**
  in achondroplastic dwarf, (9) 694
  in double uterus and double vagina, (27) **1186**
  in eclampsia, placenta praevia, pernicious vomiting and in hemorrhage due to premature separation of placenta, (86) 1834
  in placenta praevia, (16) 556, (20) 1185, (33) 1187
  intestine obstruction following, (32) 787
  on infected uterus, (91) **169**, (73) 1113
  post-mortem, pre-eclamptic coma with, living child, (15) 479
  rarer indications for operations, (16) 1982
  scar, rupture of gravid uterus in, (126) 1673
  sterility the rule after, (135) **330**, (62) **1402**
  technic, (78) 2072
  ventrosuspension of uterus, indication for, (127) 242
CHAIR for extradural anesthesia, (141) 637
CHALAZION, (37) 631
CHANCRE, double, and gonorrhea with confrontation, (95) 161
CHANCROIDS, cocain for, (40) 1492
CHARITIES, municipal, of Philadelphia, **1082**—E
CHARITY, employer furnishing treatment out of, **313**—Ml
  medical, abuse of, **140**
CHARTS, graphic feeding, method for calculating milk percentages and caloric values (44) 81
  graphic, method of studying and teaching principles of infant feeding, (2) 80
  leukocyte count, differential, new, ***1516**
CHASTITY, examination may be basis of opinion as to, but not veracity, **545**—Ml
CHAUFFEURS, vision tests for, (163) 1675
CHEEK, autoplastic restoration of, (55) **1266**
  defect, plastic operation for repair of, (81) **944**, (9) **1105**, (104) 1114, (97) 1841
CHEESE, brine-soluble compound in composition and properties of, (85) 1327
CHEILOTOMY, function-restoring operation in crippling traumatic arthritis of hip-joint, (5) **1743**, (6) 1836
CHELYDRA serpentina, development of prootic head somites and eye muscle in, (4) 474
CHEMICALS, serodiagnosis simulated by, (154) 1751
CHEMICO-PHYSICAL laboratory, report of, (13) 630
CHEMISTRY, International Institute of, proposed by Ostwald and opposed by chemical houses, **1229**—E
  new, and new materia medica, (78) **628**
  notes on, (173) 1676

CHEMOTHERAPY, pneumococcus infections, **447**—E
  typhoid, **1364**—E
CHEST; See Thorax
CHIARI, Professer, jubilee of, **918**
CHICKEN-POX and herpes zoster, (70) 249
  blood-picture in, (187) 488
  in adults, (85) **1113**, (61) **1986**
CHILBLAINS, (41) **160**
CHILD labor and Louisiana, **1169**—ab
  labor and oysters in Mississippi, **1344**—ab
  labor conference, **606**
  labor day, **139**
  unborn, rights of, **1386**—Ml
  welfare, (82) 1743
  welfare, Peoria conference on, **755**—E
CHILDBEARING: See Childbirth; Labor
CHILDREN, abdomen, acute, diagnosis, (43) 1265, (8) **1836**, (28) 1838
  abdomen, acute, treatment, (1) 864
  abdomen, tumors in, (126) 952
  acetone in urine in, *elimination of*, (92) 1195
  acetone reaction in, clinical availability of, (93) 1195
  adenoids and enlarged tonsils in, lymph-node extract for, cause of, (6) 2067
  alcoholism in, apparently free from morbid heredity, (51) 944
  amusements for growing, suitable, (135) 1328
  anemia in, chlorotic type of, (50) 1192
  anemia in, roentgenotherapy effectual stimulant in simple (50) 247
  appendicitis, acute cases, in, (17) 1577
  appendicitis, chronic, in, (37) 1191
  arthritis, *rheumatoid, in (16) 1330*
  atypical, (128) 1328
  atypical, in Dr. Groszmann's school from standpoint of neurologist, (83) 477
  backward, eyestrain and, (79) 477 ***1059**
  bladder calculus in, surgical treatment, (88) 945
  blind, training of, (78) 477
  blood and heart action in healthy, (70) 2071
  blood, coagulation time of, (2) 238
  blood-pressure in, (35) 1034
  bow-legs in small, (23) **700**
  cardiovascular disease in, (43) 557
  cerebrum symptoms in, unusual, (76) 1580
  chyle cysts in, (54) 1926
  cinematographs and influence on, (176) 1676
  colitis, acute, in, (49) 1192, (58) **1498**
  colitis, acute, in adults and, comparison of, (52) *1497*
  colloidal silver in treatment of, (78) 558
  common symptoms in, significance of, (22) **700**
  conservation of, teaching of social ethics and its relation to, (24) 1492
  convalescing, (53) **1395**
  convulsions in, treatment, (96) **1403**
  crippled, **1007**
  crippled, in English public schools, (112) 478
  crippled, in relation to community from *orthopedic standpoint*, (74) 477
  crippled, Marine Hospital at Berck-Sur-Mer principally for, (38) 239
  crippled, need for state care of, and advantages of system, (101) 1835
  crippled, special schools for, (75) 477
  cystic polypus in nasal pharynx of, (67) 1666
  deaf, (68) 477
  deaf, early home treatment, (35) 943
  development of, prematurely born, (145) **1751**
  devitalized, revitalizing, (15) 1026
  diabetes in infants and, (42) **1326**
  diagnosis in, (83) 1743
  diarrhea in, treatment, (101) 161
  digestive disturbances in, ipecac in, (67) **1499**
  diseases of, (16) 630
  diseases of, recent literature on, (24) 700
  dysentery, flagellate, in, (2) 864
  dyspepsia, intestinal, in, (26) **1033**
  eczema of face in, pathogenesis and therapy of, (15) 1664
  empyema and *pneumonia* in, (44) 1265
CHILDREN, enuresis in, (30) **402**
  epithelioma of nipple in girl of 11, primary, (11) **2068**
  eye, common diseases of, from standpoint of general practitioner, (100) 161
  eye-strain in, (107) *399*, (82) *945*
  eye-strain in, special reference to chorea, (85) 161
  fatigue resistance in, (45) 557
  feebleminded, general consideration and classification of, (73) 477
  feebleminded, literature on, **1245**
  feebleminded, medical gymnastics as prelude to physical education in, (17) 1924
  feebleminded, plea for, (22) 2067
  feebleminded, school, (11) 780, (31) 1106
  fevers of obscure origin in, **1387**—ab
  flies and sick, (73) **1987**
  food requirements of, (10) 1264
  foreign body, nail swallowed by child, (69) **1580**
  formalin excretion in urine of infants, and taking hexamethylenamin, factors which influence, (33) **1260**
  fractures of lower end of tibia in, (87) 558
  fractures of navicular bone in, (61) 702
  fresh air and, (1) 238
  gastro-intestinal disturbance in, due *to constipation, (66) 160*
  gigantism in, conditions resembling, (119) 407
  gonorrheal vulvovaginitis in, cause *of persistence of, (8) 238*
  growth of, standards for, and state of nourishment, (169) 1753
  heart beats, premature, arising in articuloventricular bundle of child, *(3)* ***1738***
  heart, healthy, in, *some manifestations taken as indications for treatment*, (9) 243
  heart size and heart function in, showing *orthostatic albuminuria*, orthodiagraphic study, (39) **1832**
  hedonal anesthesia in, (3) 479
  helminthiasis in, (3) **80**
  helminths in, causing toxic nephritis, (137) 252
  helminths in, prevalence of, at Rio de Janeiro, (44) 557
  hemorrhagic conditions in, pathology, etiology and treatment, (17) 1664
  hemorrhagic diseases of, normal human blood serum in, (106) 399
  hernia in, treatment, (82) **1029**
  hospital, *medical* school and the public, (23) 860
  hydrocephalus, internal, in operative treatment, (78) **482**
  hygiene, (71) 628
  hygiene and clinical medicine for diseases of, chair of, **917**
  hygiene, instruction in, (95) 399
  hyperpyrexia in rectum in, (104) 1037
  hysteric phobia in, treatment, (12) 1398
  infantile scorbutus in school, (52) **791**
  infection of, relation to adult lung tuberculosis, (60) 1666
  infectious diseases in, unusual complications of, (6) 940
  inguinal hernia in, treatment, (88) **864**
  intestine diseases of, (129) 478
  jaundice in, (10) **1398**
  kala-azar in, (103) **170**
  kidney calculus in, (7) 555
  laparotomies on, (66) **1928**
  Leishman anemia in, in region north of Naples, (117) 951
  leukemia, lymphatic, acute, in, (7) 238
  leukemia, *myeloid in*, with blood-picture of so-called megaloblastic degeneration, (21) 479
  leukocytes in healthy, and at different *ages*, (77) 482
  lymph-nodes, cervical, in, (103) 242
  marasmic, metabolism of, (171) 1753
  massage in various disorders of, value of, (9) **1258**
  meningitis, *epidemic type* of, in those under two, ***1755**
  meningitis in, curable, (46) 557
  mesentery chyle cysts, multiple, in, volvulus and perforation, (144) 330
  metabolism of more *active*, (129) 1337
  metabolism of, with complete absence of bile from intestines, (5) **1576**
CHILDREN, myxedema, congenital, in, thyroid grafted *into* spleen or tibia in, (121) **1405**
  nephritis, acute, primary and secondary, proctoclysis as curative and prophylactic agent in, (152) **243**
  nephrosis, chronic, (107) **705**
  nervous system, autonomic, in, atropin, pilocarpin or epinephrin tests for, (121) 1931
  nervousness in, prevention of, (165) 163, (38) 696.
  neuritis, multiple, (79) 1262
  nose, accessory sinuses in, inflammatory affections of, (37) **696**
  opiates used in, (105) 1037
  osteomyelitis and tuberculosis of bones in, leukocyte count in, diagnostic significance of, (19) **1492**
  paralysis, general, (88) 558
  paralysis of eye muscles (160) **92**
  paralysis, spastic, treatment, (103) **1672**
  pneumococcal abscess of lung in, (25) 1583
  pneumococcus infection of lungs in, chronic, (4) 2067
  pneumonia in, (36) **1926**
  polyarthritis, chronic, with enlargement *of spleen and fever (84) 406*
  pseudoglioma in, (90) 1581
  psychasthenia in, management of, treatment, (104) 629
  psychogenic disorders in, (37) 1665
  psychotherapy for, (130) ***1196***
  public health and, (66) 553
  pulse and blood-pressure in, between 6 and 14 years, (168) 1198
  respiration in, influence of artificial pneumothorax on mechanism of, (103) 1335
  respiration in, relation to and influence of normal and abnormal dental arches on, (39) 696
  rheumatic orchitis, acute, *associated* with erythema nodosum and acute torticollis in *child* of 2, ***1608**
  rheumatism in, (21) 700, (59) 1028, (23) 1264
  School: See also School, Medical Inspection of
  school, cleanliness of hands among, **382**
  school diseases, ***409**
  school, health of, ***380, 1166***
  school, hygiene of hearing for, (172) 1676
  School, Medical Inspection of: See *Schools, Medical Inspection of*
  school, pathology of, (77) **1113**
  scrofulous, after-treatment, (164) 487
  seaside sanatorium for, (122) 1336
  shoulder-joint subluxation in infants and, (31) 1745
  skin reaction to tuberculin in, (16) **401**
  syphilis, (86) 1743
  syphilis of bones and joints in, (27) 1496
  syphilis of nervous system in, (22) 86
  talipes in young, treatment, (15) 865
  temperature of, (119) ***870***
  therapeutics of diseases of infants and, (50) 1261
  tobacco chewing and snuff habits among, **1561**—ab
  tuberculin, reaction to human and bovine, in, (177) **1753**
  tuberculosis (51) **481**—ab, (212) 564, (85) 1195, (139) 1502
  tuberculosis and asthma in, (34) 1034
  tuberculosis bacillus in, portals of entry of, (3) 699
  tuberculosis, bacteriology of, (217) 564
  tuberculosis, diagnosis, (125) 699
  tuberculosis, latent, in, and adult tuberculosis, (82) 161
  tuberculosis, lung, remineralization in, (59) 1498
  tuberculosis, modern combat against, (51) 87
  tuberculosis of bone and joint, types of organism in series of, (3) **1494**
  tuberculosis of *hilas, roentgenoscopy* of, (98) 950
  tuberculosis of kidney, (42) 1034
  tuberculosis of knee, treatment, (113) 483
  tuberculosis, on Mediterranean coast, treatment, (26) **1191**
  tuberculosis, pathology of, (17) 1583
  tuberculosis, Roentgen rays in diagnosis of, (37) 86
  tuberculosis, Rosenbach's tuberculin in, (174) 1753
  tuberculosis, surgical, in, reaction to tuberculin from bovine tubercle bacilli in, (92) **1988**
CHILDREN, tuberculosis, thoracic *lymph-node, diagnosis of, (84) 1743*
  tuberculosis, tuberculin in diagnosis of, (110) 1196
  tuberculous mediastinal lymph-nodes in, (197) **873**
  tuberculous puerperae and their, what should be done with, (84) 697
  typhoid medication in, (72) 1493.
  typhoid vaccination, ***344**
  typhus, (79) 482
  urinary infections in infants and, (14) **1577**
  urticaria in, coming to Sydney, (12) 1668
  Vincent's angina, (84) 399
  vision, defective, (91) 84
  vision of school, testing, (129) 1405
  vomica in, (29) 1191
  vomiting, cyclic, in, *adrenal origin* of, (32) **1926**
  vulvovaginitis, (8) 238, (4) **1104**
  well-fed, (23) 1980
CHILLS at irregular intervals usually pronounced of malarial *origin*, (43) 1028
CHINA, American medical colleges establish branches in, **843**
  health of Europeans in, in relation *to climate and other factors*, (14) 1191
  Medical *Missionary* Association, **1820**—ab
CHINESE drugs and medical advertising, ***1709—E***
  medicine in America, (54) 1028
CHINOSOL, composition of, **1381**
CHIROPRACTOR, law violated by, **1181**—Ml
  violation of statute, ***1021***—Ml
CHLORETONE in epilepsy, (1) 629
  overdosage, (23) 1983
CHLORIDS, content of blood on different diets, (80) 1671
  diabetes *a sign of intoxication with*, (60) **1402**
  in simple polyuria, elimination of, and influence of sodium bicarbonate, (58) 1402
CHLORIN, bound, in gastric juice, especially *with stomach cancer, (92)* 1403
CHLOROFORM and ether in anesthesia, **1304**—E
  anesthesia, epinephrin in, (20) 1668
  anesthesia in nose and throat surgery, (68) 628, (30) 861
CHLOROMA, atypical, (45) 1191
CHOKED DISK, (128) *560*
  decompressive measures with (135) 870
CHOLECYSTECTOMY from back forward, (48) **1401**
  immediate, in acute gall-stone cholecystitis, (58) **325**
CHOLECYSTITIS and cholelithiasis associated with pregnancy, (28) **1665**
  and ulcer of duodenum, diagnosis, (110) 1189
  gall-stone, cholecystectomy in acute, (58) **325**
  paratyphoid, (49) **552**
  pellagra complicated by, (22) *475*
  perforative, acute, complicated by general peritonitis, (83) 1396
CHOLECYSTOTOMY, angulation of junction of hepatic and common ducts after, simulating common duct *obstruction*, (16) **625**
CHOLEDOCHODUODENOSTOMY, (63) 1333
CHOLELITHIASIS: See also Gall-*Bladder Calculus*
CHOLELITHIASIS, (37) 477, (32, 33) 1110
  and cholecystitis associated with pregnancy, (28) **1665**
  diet in, **1651**
  in Japan, (51) **1927**
  medical treatment, **1915**—ab
  prognosis in, (92) 84
  surgical treatment of pancreatitis and, (132) 401
CHOLERA, action of ultraviolet rays on plague and, germs, (140) 1338
  agglutinating serum, **1461**
  and smallpox among Turkish refugees, **222**
  at Mecca, **219**
  at seat of Balkan War, (96) 950, (144) 1270
  bacteriologic diagnosis of (72) 791
  bacteriology of, (21) **1984**
  germs, vitality of, in contact with acids, (151) 1198
  hog, felon from infection with, (47) *866*
  hog, virus of, (29, 35) 475, (43) 1106
  immunization by mouth against experimental, (145) 1197

CHOLERA in India, recent research on, (11) 699
  mission and Red Cross missions return from Bulgaria, **222**
  serum, hog, virulent salt solution as virus in manufacturing, (37) 1920
  transfusion and permanganate in, (67) **167**
CHOLESTEATOMA, epidermoid, of brain, (118) 1270
  of ear, (20) 81
CHOLESTERIN esters and lecithin in blood-serum, (76) 703
  excess in blood, adrenal origin of, (60) 482
  in blood in various diseases, (98) 1493
  in blood, variations in, under vaccination against typhoid, (70) 1267
  in paroxysmal hemoglobinuria, (98) **1037**
  influence of lecithin and, on growth of tumors, (28) **942**
  influence of saponin and, on action of enzymes, (169) 1198
  metabolism, (86) 1929
CHLOESTERINEMIA, experimental, (113) 1749
CHOLIN, modification of glycogen in liver after intravenous injection of, (122) 952
CHOLOGEN treatment for gall-stones, 383—P
CHONDRITIS, suppurating, following operation for encapsulated, perforated stomach ulcer, (130) 1589
CHONDRODYSTROPHIA: See Achondroplasia
CHONDROMA: See Enchondroma
CHONDROSARCOMA, extreme malignancy of, (77) 88
CHONDROTOMY for emphysema, efficacy of, (54) 2070
CHORDOMAS, (171) 488
CHOREA, (76) 863
  blood-picture in, (110) 705
  eye strain in children with special reference to, (85) 161
  Huntington's heredity in, **1911**—ab
  magnesium sulphate in, (166) 1271
  nose as source of infection in, (68) 1986
  of heart, (40) **789**
  salvarsan in, (46) **247**
  Sydenham's treatment, **1009**
  syphilitic origin of, **63**
CHORIO-EPITHELIOMA: See Deciduoma Malignum
CHORIOID, atrophy of, unusual, (81) 553
CHORIONIC villi in uterus wall eighteen years after last pregnancy, (16) **1185**
CHRISTIAN SCIENCE, a protest, (127) 1264
CHRISTIANIA, campaign against tuberculosis in, (133) 1932
CHROMOSOMES in man, (8) **1919**
CHROMO-URETEROSCOPIES with indigocarmin as functional kidney test, results of 200, ***185**
CHURCHES, social service adopted by, program of, **1001**—E
CHYLE cysts in children, (54) 1926
  cysts, mesentery, multiple, in girl of 7, volvulus and perforation, (144) 330
CHYME, examination of, in diseases of gastro-intestinal canal, (98) 1189
CICATRIX, hydatid in lung and in, (3) 1264
CIGARET and tobacco, **617**
CINCHONA ALKALOID, amorphous, in malaria, value of, (19) 1330
  anesthetic action of, on cornea, (81) 1113
CINEMATOGRAPH exhibitions, psychology of, (200) **874**
  heart action, (102) 250, (124) 1749
  influence on children, (176) 1676
  of stomach, simplified, (108) 1037
  show as health problem, **1234**—E
  show, regulation of, **459**
  stomach movements, pathologic, (78) 792
  tuberculosis in, (76) 242
CIRCULATION, action of therapeutic exercises on, (63) 2071
  and carbon dioxid, **451**—E
  blood, active participation of arteries in, (121) 1501
  blood in lungs, (86) 633
  collateral veins in, (60) **325**
  comparative physiology of, (161) 708
  coronary, action of epinephrin on, (27) **2069**
  cutaneous, main regulation of heat loss by control of nervous system over sweat-glands, **1794**—E
  disturbances from sudden contraction of vagus nerve, (57) **702**
CIRCULATION, disturbances of, physical measures for, **1553**
  disturbances of, therapeutic measures in, various, **1554**
  in arm of man, (2) 1738
  in collapsed lung, (80) 249
  in lungs as influenced by differential pressure, (85) 704
  physical laws regulating, (162) 1752
  respiration and, **1542**—E, (43) **1833**
CIRCUMCISION, leg, for varicose ulcer, (40) **1838**
CIRRHOSIS, Liver: See Liver, Cirrhosis
CISTERNA magna, drainage of, in meningitis, (1) **940**
CITRUS fruits, immature, validity of law prohibiting shipment of, **1323**—Ml
  juices, chemical reactions of, in body, **1381**
CIVILIZATION levels, different, in modern society, (25) 159
CLAIM, acceptance of warrant for, precludes recovery of balance, 2064—Ml
CLAMP, lid, hemostatic, U-shaped, (85) 945
  pile, for hemorrhoids, (89) 319
  tonsil, new, ***2044**
  umbilical cord, (137) 321
CLAUDIUS' method and Pfeiffer's modification of Tsuchiya's method for quantitative determination of albumin in urine (85) 1671
CLAVICLE, dislocation, (60) 166
  fracture, irreducible, bone plating in, (30) 81
  fractured, splint for, (26) **781**
  restoration of, (106) 1114
CLAW-FOOT, how to relieve it, (131) **321**
CLEFT PALATE, (62) 1580
  and harelip, treatment, (64) 701
  operative treatment, (49) 398
CLIMATE, health of Europeans in China in relation to, and other factors, (14) 1191
  health of Europeans in Uganda and East Africa influenced by, and other factors, (35) 1669
  hot, regulation of heat of body in, **1794**—E
  tuberculosis and, (128) 85, (123) **1836**
  vs. sanitation, (58) 863
CLIMACTERIC: See Menopause
CLINICAL reports, fallacy, **1243**—P
CLINICS, municipal, of San Francisco, (107) 1029
  of Europe, some, (21) 780, (22) 1919
  of Vienna, changes in organization of, **1721**
CLITORIS, melanosarcomas of, (75) 1747
CLOSET-cans, sanitary, in prevention of typhoid infection, **308**—C
  dry, (111) 1923
CLOTHING, brushing of, and tuberculosis, **1805**
  hygienic qualities and physical action of fabrics for, (78) 242
  in tropics, **370**—E
CLUB-FOOT: See Talipes
COAL-TAR disinfectants, toxicity studies with, (30) **695**
COBRA Venom Reaction: See Reaction, Cobra Venom
COCAINE anesthesia, complete laryngectomy under, (109) 1667
  for chancroids, (40) 1492
  habit, prevalence of, **1363**—E
  injection into perineal tissue as head emerges, (92) 950
  poisoning, (24) 401
COCCACEAE in collection of museum of natural history, systematic study of, (44) 1920
COCILLANA compound, syrup of, **526**—E, **537**—P
COCKROACHES, cancer induced in rats by feeding with parasites of, (52) **948**
  destruction of bedbugs and, **1902**
  house, as carrier of disease, (33) 695
  parasites and rat tumor, establishment of casual relation between, **1077**—E
  susceptibility of, to plague bacilli inoculated into body cavity, (113) 1836
COD-LIVER OIL, amount of, in various preparations, **1093**—P
  for feeding marasmatic infant, topical use of, (82) 319
COFFEE, substitutes for, **390**, (115) 1038, **1094**
COLD, gangrene of feet from exposure to, (155) **1675**
  hyperemia, active, following local exposure to, (4) 1979
  vasomotor reflexes elicited by heat and, from regions devoid of temperature sensibility, (36, 37) 1832
COLDS: See also Rhinitis
COLDS, common, and catarrh, bacteriology of, (64) **1982**
  common, and vaccine therapy, (13) **1980**
  in head, (20) 1837
COLEY'S fluid, cancer treated by, **228**
COLITIS, acute, in children, (49) 1192, (58) **1498**
  acute, in children and adults, comparison of, (52) 1497
  infectious, acute, in adults, (48) 1192
  membranous, rhizotomy for, (58) **167**
  mucous, appendicitis and membranous pericolitis, corelation of, **149**—ab
  mucous, fever with, (118) 1749
  ulcerative, (114) **705**
COLLARGOL in treatment of children, (78) 558
  roentgenography of seminal ducts and vas deferens by injecting, ***800**
COLLEGES, American Medical, establish branches in China, **843**
  athletics in after-life, **300**—ab
  medical, American standard for entrance to, **1003**—E
  medical, at Richmond, Va., and [illegible] **14**—E
  [illegible] **690**—ab
  [illegible] to organize, [illegible]
  medical, instruction in hygiene in, and training of health officers, ***1199**
  medical, of United States, **212**—E
  medical, of United States, first fifteen, **1318**
  medical, of United States, third classification of, **231**
  medical, organization, **932**—ab
  medical, what state should expect of its, (75) 1834
COLLOID-CHEMICAL theory, invalidity of, in nephritis and edema, ***345**
  theory of water absorption by protoplasm, ***348**
COLLOIDS in living tissues, (178) 1272
COLLYRIUM—Wyeth's, **1557**—P
COLOCYNTH poisoning, (15) 2068
COLON, cancer, (6) 864
  cancer of rectum and, irremovable, appendicostomy instead of colostomy for obstruction due to, (3) **555**
  dilatation, congenital development and prevention of, (96) 1114
  displacements, (35) 81
  diverticulitis, **364**—T
  extirpation of, experimental anatomic and physiologic observations bearing on, total, **73**—ab
  hairpin impacted in ascending, cecotomy for removal, (20) 479
  inflammation around ascending, and dilatation of cecum, disturbance from, (18) 2069
  irrigation, roentgenoscopy during, (85) **793**
  M-shaped, (4) 1258
  pseudoperitoneal cauls of, **237**—ab
  resection of one-third of, for irreducible intussusception in infant five days old, (33) 1832
  resection of stomach and, simultaneous, (44) 1926
  resection, technic for, (139) 408
  roentgenoscopy of, functioning, (102) 1588
  stasis, ileosigmoidostomy for, (22) **695**
  tuberculosis, (71) **1671**
  tuberculosis, surgical, of rectum, anal canal and, (44) 480
COLOPTOSIS and gastroptosis transversa as seen from post-mortem examinations, (81) 1922
COLOR blindness, (149) 479
  in animal kingdom, distribution of, (113) 794
  perceptive organs, rods as, (37) 1028
  problem in nursing in South Africa, **1894**
  sense and emotion of sex, (2) 85, (70) 399
  sense of bees, (161) 562
COLORADO medical news, **292**, **1083**, **1368**, **1548**, **1967**
  method for examination and care of public school children, (10) 780, (67) 863
  state board April report, **1728**
  state board January report, **930**
COLOSTOMY, appendicostomy instead of, for obstruction due to irremovable cancer of rectum and colon, (3) **555**
COLOSTOMY, transverse, as operation of election, (2) **1836**
COLOSTRUM as nutriment, (67) 2071
COLT'S apparatus, abdominal aneurysm operated on by, (5) **1836**
COMA in diabetes, (74, 75) **633**, (109) **1673**
COMMISSION on End-Results of fractures of Femur, report, (153) **243**
COMMITTEE to pass on new medical books, suggestion for, **1901**—C
COMMUNICATIONS between patient and physician, confidential, (120) 242
COMPENSATIONS of illness, (58) 1666
COMPLEMENT Binding: See Serodiagnosis
COMPLEMENT Fixation: See Serodiagnosis
COMPLEMENT, origin of, **1960**—E
COMPRESSED-AIR apparatus for pressure massage in hospitals, (134) **1501**
CONCEPTION, portio vaginalis of uterus in relation to, (41) 324
CONDON for draining ascites, (130) **637**
CONDYLOMATA, cultivation of treponema calligyrum from, (51) **241**
CONFEDERACY, Association of Surgeons of Army and Navy of, **1893**
CONFINEMENT to house, not an illness, **544**—Ml
CONJUNCTIVA diseases with trachoma bodies, clinical course of, (29) 397
  foreign bodies in cornea and, removal of, (26) 1496
  herpes iris of, (12) 1661
  sclerae, trachomatous changes of plica semilunaris conjunctivae and, clinical and pathologic histologic study, (23) 165
CONJUNCTIVITIS, blastomycetes in, resembling trachoma, (80) 326
  epidemic, investigation of cause, (22) 165
  follicular, and adenoids, (27) 861
  gonorrheal, aborted by two per cent. solution of nitrate of silver, (91) 1494
  Parinaud's, etiology of, (38) 1028
  phlyctenular, etiology and treatments, (150) 243
  swimming-tank, (79) **634**
  vernal, (78) 697
CONNECTICUT Agricultural Experimental Station, work of, in maintaining high standard of food products, **132**—E
  eclectic November report, **79**
  homeopathic November report, **79**
  medical news, **58**, **135**, **214**, **1083**, **1802**
  state board homeopathic March report, **1322**
  state board March report, **1254**
  state board November report, **78**
CONSERVATION of human life, or preventive medicine, (78) 1743
  public, of human lives, (67) 319
CONSTIPATION: See also Obstipation
CONSTIPATION, (95) 1494, (69) 1922
  chronic, (24) 1740
  chronic, treatment, (8) 1329
  diet in, (47) 1833
  gastro-intestinal disturbance in children due to, (66) 160
  habitual, (127) **91**, (63) 696
  medical standpoint, (18) 475
  morphin and, **1711**—E
  petrolatum in, **1320**
  spastic, chronic, serious consequences of, (179) 488
  surgical treatment, (19) 475
  wheat grains roasted in diet for, (129) 1116
CONSTITUTIONAL diseases, **1806**
CONSULTATIONS, (62) 1666
CONSUMPTION: See Tuberculosis, Lung
CONTAGIOUS DISEASES among American Indians, **1814**—ab
  in infant wards, prophylaxis of, (61) **867**
CONTRACT Practice: See Practice, Contract
CONTRACTION, volitional, of tensor tympani muscle, (51) 2070
CONTRACTURE, ischemic, resection of wrist bones for, (136) **1501**
  spastic, neuroplasty in, (9) 1491
  spastic, prevention and treatment, (154) **486**
CONUS, tumors of cauda equina and, giant, **1909**—ab
CONVULSIONS in children, treatment, (96) **1403**
  in infants, diet for, (1) 1103
  in infants, etiology of, (41) 81

- CONVULSIONS, suppression of, in eclampsia, (41) 86
- COOPERATIVE association, medical, 619—ab
- COPAIBA exanthem after use of, (69) 1840
- COPPER colloid, action of, on blood, (77) 867
  - colloid in cancer, (35) 1496
  - effect on experimental tuberculosis, ***887**
  - in external tuberculosis, (91) 1268
  - mining company, information concerning, **1016**
  - sulphate and sulphuric acid poisoning, acute, blood findings in, (79) 792
  - sulphate test for urobilin, (86) 1037
- COPRA itch, (18) 244
- CORIAMYRTIN, pharmacologic action of, (95) 319
- CORNEA, anesthetic action of cinchona alkaloids on, (81) 1113
  - calcareous degeneration of lens capsule and, (27) 397
  - conical, actual cautery in, (34) 1028
  - degeneration, (53) 791
  - dislocation of lens and perforation of, (57) 241
  - dystrophia epithelialis, (74) 1396
  - foreign bodies in conjunctiva and, removal of, (26) 1496
  - foreign bodies in, treatment, (63) 83
  - injuries, traumatic, (36) 1187
  - staphyloma of, peribulbar implantation cyst after removal of, (26) 397
  - tattooing of, by piece of lead from copying pencil, accidental, (91) 1581
  - therapeutic cataphoresis for infectious processes of, special advantages of, (58) 1586
  - ulcer, (100, 108) 785
  - ulcer, hypopyon, treatment, (65) 1982
- CORNUTOL, vacules, **45**
- CORONARY circulation, action of epinephrin on, (27) **2069**
- CORONER, ancient office of, (34) 1665
  - office of, **1644**—E
- CORPUS callosum, effect of puncture of, on eye, (75) 249
  - callosum, puncture of, (5) **2066**
  - luteum and pregnancy, (47) 1985
  - luteum, effects of secretion of ovary and, (98) 328
  - luteum, lipins of ovary and, (61) **319**
  - luteum, pigment of, **1078**—E
  - luteum, production and menstruation, time relations between, (138) 637
- CORWIN'S tonsil hemostat, (113) 1328
- COST-OF-LIVING and prevention of disease, ***1757**
  - high, and cost of good living, **134**—E
- COT, emergency, and bed, combined, ***122**
- COTTON mill and tuberculosis, (71) 1327
  - seed meal intoxication, (69) **1028**
  - seed meal, organic phosphoric acid of, (74) 161
- COUDREY found guilty in federal courts, **1161**—E
- COUGH, common cause of, (76) **88**
  - nose and throat reflexes causing, (25) 861
  - tracheal, (154) 871
- COUNCIL ON PHARMACY AND CHEMISTRY, constructive work of, **58**—E
  - supporting, **613**—P
- COUNTRY, better health conditions for, how obtained, (124) 1328
  - healthfulness of, and yet a field for young physician, **1233**—E
- COUNTY boards of health, (58) 1834
  - medical society, work and aims of, (83) 1107
  - society bulletin, (66) 398
- COUTANT fraudulent deafness cure, **303**—P
- COXA VARA with spontaneous recovery from deformity, (34) 1260
- CRAMPS, professional, multiple, in a psychasthenic, (43) 782
- CRANIUM, hemorrhage of, in newborn infant, (84) **868**
  - hemorrhage within, **1248**—ab
  - injury and spinal lesion, (63) 398
  - operation on posterior fossa of, (41) **947**
  - tumor after decompression, localization of, (122) 1264
- CRAWFORD, Jane, grave of, first subject of ovariotomy, **67**—C, **228**—E
- CREATIN content of muscle under normal conditions, relation to urinary creatinin, (29) 626
  - elimination of creatinin and, in urine of parturients, (71) 482
  - estimation of creatinin and, in diabetic urines, (73) **1029**
  - in urine, **1302**—E
- CREATININ, elimination of creatin and, in urine of parturients, (71) 482
  - estimation of creatin and, in diabetic urines, (73) **1029**
- CRETINISM, experimental, morphologic studies in, (15) 2066
  - in Austria, (80) 168
- CRIME and epilepsy, the cost, (92) 697
  - cause and prevention, (132) 85
  - operation for prevention of procreation as part of penalty for, **779**—Ml
  - retardation and constitutional inferiority in connection with education and, (37) 552
- CRIMINAL insane, (40) 2070
  - physique, ***1351**
  - responsibility, attenuated, (38) 789
  - sterilization of, (97) 84, (62) 1834
  - tendencies, surgery for, **368**—E
  - use of pathogenic bacteria, **1555**
- CRIPPLED CHILDREN discussed, **1007**
  - in English public schools, (112) 478
  - in relation to community from orthopedic standpoint, (74) 477
  - industrial training for, in Russia, (92) 161
  - Marine Hospital at Berck-Sur-Mer principally for, (38) 239
  - school for, in Cleveland, management, maintenance and efficiency of, (12) 780
  - special schools for, (75) 477
- CROFTAN'S criticisms and Cabot's findings of pitfalls in diagnosis, **386**—C, **464**—C
- CROSSED-HANDS maneuver to aid delivery, (134) **1337**
- CROTALIN in epilepsy, **850**, **1001**—E, **1246**, (73) 1262, **1811**—C
  - in epilepsy and nerve diseases, (94) 399
  - in lung tuberculosis and in epilepsy, action and administration of, (84) 1189
- CRYING in infant, diagnostic importance of manner of, (30) 1191
- CRYPTORCHIDISM, **1319**
- CUDBEAR, tincture of, **147**
- CUNNINGHAM mail-order school, **1243**—P
- CURE and kur, **1308**—E
- CURET for bridge in radical mastoid, (112) 1328
  - uterus, use and abuse of, (101) 1108
- CURETTAGE, contra-indications to, (49) **1395**
  - of pharynx in adults, (25) 861
- CYANOSIS, stasis, hemorrhages in, (99) 705
  - stasis, traumatic, (213) 564
- CYCLOPHORIA, static, (20) 1191
- CYST and fistula in neck, (45) **948**
  - appendix, (33) 86
  - bone, long, solitary, (136) 1932
  - branchial, suppurating, (5) 1494
  - chyle, in children, (54) 1926
  - chyle, mesentery, multiple, in girl of 7, volvulus and perforation, (144) 330
  - connected with hernia sacs, etiology of, (19) **1191**
  - Dermoid: See Dermoid, Cyst
  - epidermoid, pelvis of, unusual symptoms with, (108) 951
  - glia, cerebellar, (117) 483
  - kidneys both studded with, (41) 1034
  - liver, non-parasitic, (16) 1582
  - liver, solitary, **152**—ab
  - mesentery, (81) 558
  - neck, of congenital origin, (9) 1744
  - of entameba tetragena, (17) **396**
  - omentum, (25) 1185
  - ovary, differential diagnosis, (157) 708
  - ovary, etiology, pathology and treatment, relation to child-bearing, (128) 320
  - ovary, gelatinous, pseudomyxoma of peritoneum arising from perforation of, (34) 86
  - ovary, surgery for, conservative, disadvantages of, (42) 1926
  - ovary, with twisted pedicle, (111) 1835
  - pancreas, **237**—ab, (18) 946
  - pancreas encircled by, (110) 1404
  - pancreas, with acute symptoms, (19) 946
- CYST, peribulbar implantation, after removal of staphyloma of cornea, (26) 397
  - spleen, (29) 1832
  - tuberculous, originating in pancreas, (125) 321
- CYSTITIS, chronic, and retention of urine, drainage for, beneficial effect on damaged kidneys, (31) 1400
  - chronic, in female, management of, (10) 1577
  - nascent iodin fumes in, (67) 558
  - polyp growth in, (91) 483
  - rebellious, treatment, (79) **1929**
  - tuberculous, in elderly, (68) **558**
- CYSTOMA, multilocular, of lower jaw, **1248**—ab
- CYSTOPEXY, (161) 1675
- CYSTOSARCOMA, stomach, primary, (136) 1337
- CYSTOSCOPE as aid in surgical diagnosis, (122) 85, (35) 1492
  - immobilizing device for, (46) 1400
  - in determining operability of cancer of uterus cervix, (33) **788** (52) **1111**
  - in diagnosis of kidney tuberculosis, value of, (77) 864
  - limitations of, (2) 316
  - Nitze, diagnosis of ureter calculus by wax-tipped whalebone filiform bougie used with, (158) 162
  - what does it reveal? (75) 1189
  - with calculi in bladder, (43) 1400
- CYSTOSTOMY, retention urinal after, (65) 1671
  - suprapubic, (94) 1189
- CYSTOTOMY, suprapubic, (74) 1189

D

- DACRYOCYSTITIS, *acute, treatment*, ***727**
  - chronic, extirpation of lacrimal sac in, (26) 861
- DAISY headache powders and John Lawson, **1466**—E
- DAMAGES of four hundred dollars imposed on Paris Medical School, **1895**
  - physician visiting patient without her consent has to pay, **1893**
  - traumatic neurosis dragging through 18 years' litigation for damages, (57) **1986**
- D'ARIER'S disease: See Keratosis Follicularis
- DARTMOUTH, voluntary curtailment of medical course by, **1547**—E
- DAVID Sassoon Hospital, Poona, surgery at, (20) 323
- DAVISON operation for undescended testicle, (66) 944
- DAYTON flood sufferers, medical books for, **1800**—E, **1810**—C
- DEAFMUTISM, cause, prevention and cure, (137) 1030
  - prevention of, (8) 81
- DEAFNESS, (69) 477
  - catarrhal, prevalence of, its economic consideration, (115) 1328
  - congenital, sporadic, and deafness from syphilis, (15) 786, (13) 1190
  - congenital, traumatic and toxic causes, (129) 162
  - Coutant's cure for, **303**—P
  - due to diathetic and constitutional conditions, (128) 162
  - due to middle ear disease, (127) 162
  - in children, (68) 477
  - in children, early home treatment, (35) 943
  - of Barany type, recovery of hearing after nearly a year of, (142) **707**
  - otosclerosis cause of, (130) 162
  - progressive, systemic factors in etiology, (118) 242, (54) 1262
  - quinin, dose of, followed by total, (80) 1922
  - salvarsan cause of, ***742**
- DEATH certificates and osteopaths in New York, **1717**
  - certificates, duration of disease stated on, for classifying causes of death, (21) 1831
  - rate, lowest, on record, **916**
  - sudden, (166) **1118**
- DECIDUOMA MALIGNUM, (54) **1192**, (80) **1396**
  - cases at university maternity, (22) **1185**
  - of retained testis with multiple metastatic growths, (30) 1838
  - specimen of, still in uterus, (38) 1745
- DECOMPRESSION, intracranial tumor after, localization of, (122) 1264
  - new operation for, (121) **162**
  - sclera, *in intra-ocular tension*, (30) 781
- DECOMPRESSION, spinal, for meningomyelitis, **1392**—ab
- DEFECATION, action of opiates on, mechanism of, (102) 328
- DEFECTS, physical, and penal discipline, (132) 699
- DEGENERACY: See also Abnormality; Backwardness; Feebleminded; Idiots; Imbeciles
- DEGENERATES, pathology and treatment, (30) 2069
- De GIAXA'S tuberculin, local action of, (128) 1932
- DEJERINE-KLUMPKE, Madame, knighthood in legion of honor conferred on, **608**
- DELAWARE medical news, **1967**
  - state board December report, **312**
- DELINQUENT, defective, (4) 1918
  - sterilization of, (62) 1834
- DELIRIUM, abstinence, in chronic alcoholism, (104) 406
  - drugs causing, diagnosis of, (59) 1982
- DELIVERY: See Labor
- DELUSIONS, somatic, somatic sources of, (68) 399
- DEMENTIA PRAECOX, (70) 241, (94) 1037
  - Abderhalden's technic of serodiagnosis, (63) **949**, **1727**
  - ductless glands examined in eight cases of, (31) **861**
  - law should not allow patient suffering with, to be at large, **920**—ab
  - serodifferentiation of progressive paralysis and, (135) 560
  - some suggestions for general practitioner, (80) 1667
  - symptomatology and prognosis in, essential features of, (68) 863
  - *without delusions or hallucinations*, type most frequent outside hospital, (54) **782**
- DENGUE, blood-count in, differential, (15) 1033
  - history, symptomatology and epidemiology, (35) 1325
  - three-day and seven-day fever, problem of, (16) 1033
- DENTAL arches, malformation of, and necessity of orthodontic interference, (109) 161
  - arches, normal and abnormal, relation to and influence on respiration in children, (39) 696
  - aspects of rhinology, (16) 1109
  - surgery, recent work on, (36) 1400
- DENTISTRY and optometry, (82) 553
  - nitrous oxid and oxygen as anesthetic for, (8) 164
- DENTISTS and general anesthesia, **532**
  - French statistics of physicians, pharmacists, midwives and, **917**
  - organization of, **609**
- DENTITION, influence of internal secretions on, (101) 559
- DEPRESSOR, visceral, for closing laparotomy wounds, ***897**
- DERMATITIS exfoliativa, progressive degeneration of lenticular nucleus, (105) **794**
  - formaldehyd producing, ***590**
  - pregnancy, serotherapy of, (33) **2069**
  - repens, infectious eczematoid dermatitis and acrodermatitis perstans, possible interrelationship of, (37) **782**
  - Roentgen-ray, epithelioma developing at site of, **2025**—ab
  - Roentgen-ray from standpoint of general practitioner, (94) 1268
- DERMATOLOGIST and proprietary remedies, **1243**—P
- DERMATOLOGY, elements of, (48) 552
  - internal secretions in relation to, (1) **1982**
  - recent advances in, (73) 88, (29) 866
  - therapeutics in, (53) 1666
- DERMATOSES, moist, dry treatment of certain, (69) 160
- DERMOIDS of floor of mouth, (96) 1500
  - at sclerocorneal margin, two cases, (16) 1739
  - origin of, (99) 328
- DESCARTES, skull of, **532**
- DES MOINES Specialists Company, **1900**—P
- DETROIT Saturday Night in line against fraudulent advertising, **1711**—E
- DEVELOPMENT, arrest of, limited to skull and scalp, (62) 1193
  - of newborn infants, (142) 92
  - precocious, in boy of six, (15) 401
- DEXTROCARDIA, familial, congenital, ***1064**

DEXTROPHORIA, (141) 243
DEXTROSE, gaseous products of fermentation of, by B. coli, B. typhosus and B. welchii, (72) 161
DIABETES INSIPIDUS and hypophysis, (130) **706**
  etiology of, (121) 560
  polyuria in, mechanism of, (179) 1753
DIABETES MELLITUS, (74) **792**, (104) 1667
  acidosis in, estimation of, (79) 704
  acromegaly with, nerve cells in isolated part of nervous portion of hypophysis-tumor in, new formation of, (2) **1663**
  and dangerous gluten flours, **909—E**
  and diseases of eye, (33) 1838
  and ductless glands, (61) 1028
  and general asthenia, (86) **2070**
  and non-diabetic glycosuria in one person, (58) 1839
  and Pavy, **1159—E**
  bladder calculus in, (84) **1841**
  blood-vessel lesions in, (51) 1985
  carbohydrate in, ***1410**, (91) 1672
  coma in, (75) **633, 1673**
  creatinin and creatin in urines in, estimation of, (73) **1028**
  dialysis of urine in (95) 90
  diet in, (126) **1750, 1651**, (93) **1929**
  dietary, starch days in, (138) 92
  diets in, influence of different ones, (52) **867**
  disappearance of sugar after removal of tumors in, ***661**
  experimental, dependence of disturbances in, on concentration of laving fluid, (70) 1586
  foods offered for sale in United States, ***2037**
  flours and foods in, **922—P, 1172—P**
  gangrene of lower extremity due to, conservative treatment, ***1126**
  glucose in urine in, action of lactic acid bacilli on percentage of, (87) **477**
  in acute partial pancreatitis, (47) **1192**
  in infants and children, (42) **1326**
  individual treatment, (28) 1330
  kidney lesions and, (49) 866
  latent, **1554**
  malum perforans in, (42) 398
  pregnancy in, (69) 319
  pregnancy in, treatment, **1913—ab**
  prevalence of, in Scandinavian countries, (206) **874**
  proctoclysis with sugar solution in, (100) **1841**
  sign of intoxication with chlorids, (60) **1402**
  sugar in blood in, (93) 1403
  theory and treatment, (10) 239
  treatment, (6) 1258
  treatment, modern, **1364—E**
  treatment, progress in last fifty years, (85) **1333**
  Wassermann reaction in, and its relation to acidosis, ***1139**
  with bladder disease, pneumaturia and apparent subsidence of glycosuria in, (149) 1674
DIABETIC compound, Fulton's, **225—P, 384—P**
  foods, **2052—E**
  foods offered for sale in United States, ***2037**
DIAGNOSIS, clinical vs. pathologic, **414—ab**
  diagnostic doubts of Dr. Cabot, **145—C, 386—C, 464—C**
  early, and prompt action in certain conditions, importance of, (80) 697
  from infant's cry, (58) 557
  indispensable adjuncts in, (8) 1577
  liability for negligence in making, **1907—M**
  of fetus presentation and position, abdominal and vaginal examination in, comparative value of, (87) 629
  pitfalls in abdomen surgery, (16) 695
  puncture of bone marrow in, value of, (115) 560
  pupil reactions in differential, improved technic for estimating, (94) 704
  refinements of, possible in general practice, (10)
  significant signs in, **1864**
  stethoscope in physical, (8) 624
DIAGNOSTICIAN, (69) **863**
DIAGRAM for teaching varieties of regular astigmatism, ***1538**
DIALYSIS technic for serodiagnosis of pregnancy, unreliability of, (111) 1835
DIAPHRAGM and heart neurosis, (88) 634—ab
  eventration, (110) 1501
  fascia flap for restoration of, experimental research, (75) 2072
  hernia, (146) 330, (5) **624**, (19) **780**, (66) 949, (114) 1749
  hernia, congenital, (72) 1986
  hernia, probably traumatic, in adult consumptive, (44) 1584
  paralysis after anesthesia of brachial plexus, (136) 1197
  paralysis, induced, in lung disease, (124) 1405
  rupture, subcutaneous, and positive pressure (Meltzer), (83) **783**
DIARRHEA, children, treatment, (101) 161
  chronic, as surgical symptom, (66) 241
  chronic, diagnosis and treatment, (152) 871
  coprologic localization of source of, (53) 867
  infants, bottle-fed, (163) 163
  infants, feeding problem, (138) 243
  infants, summer, (74) 1986
  infants, whey in, (117) **1404**
  intestine, direct examination of lower, for diagnosis and treatment of, (101) **320**
  summer, and summer heat, (10) 1830
  summer, from standpoint of clinician, (17) 1919
  with vomiting, symptoms from loss of fluids in, (56) 1402
DIASTASE and glycogen of animal tissues, (45) 318
  and starch of plant tissues, (49) 318
  content of feces with fermentation dyspepsia, (190) 563
DIATHERMIA, influence on temperature, (41) 2070
DIATHESIS, (77) 949, (57) 1746
  exudative, eosinophilia with, (97) 250, (102) 1037
  exudative, in mucosa of genito-urinary tract, manifestations of, (107) 1195
  exudative, skin reactions in, (95) 1195
  gouty, menstruation in, (65) 1112
  lymphatic, predisposes to stomach ulcer, (87) **1268**
  spasmophilic, dyspnea from spasmodic contraction of musculature of bronchi in, (131) **1196**
  uric acid, electricity in, (2) 694
DIATUSSIN, **1557—P**
DIAZO Reaction: See Reaction, Diazo
DIET: See also Feeding
DIET and action of drugs, **2048—E**
  and exercise in relation to growth, (131) 1328
  before and following operations, (88) **1500**
  cardiovascular disease, (53) **1497**
  chlorid content of blood on different, (80) 1671
  cholelithiasis, **1651**
  constipation, (47) 1833
  constipation, neurasthenia, heart disease, etc., roasted wheat grains in, (129) 1116
  convulsions and allied conditions in infants, (1) **1103**
  diabetes, **1651**, (126) **1750**, (93) 1929
  diabetes, carbohydrate in, (91) 1672
  diabetes, influence of different, (52) **867**
  diabetes mellitus, starch in, (138) 92
  disturbances of upper respiratory tract, errors of, (89) 399
  enteritis in infants, (121) 400
  eugenics and, **1895**
  farinaceous, and auto-intoxication, **1378—C**
  hospital, Catholic and Protestant, **1088**
  in acute disease, (90) 1494
  in gout, **1720**
  in infections of infants, (66) **2071**
  in nephritis, chronic, treatment, **1732—ab**
  individualized, in institutions, **1720**
  influence on formation of indol in rabbits, (29) 946
  list for use on board ship, (160) 479
  non-carbohydrate, and fulguration, effect on transplantable rat sarcoma, **2021—ab**
  Prochownick's, in pregnancy, **617, 928**
  protein free, in chronic nephritis, favorable influence of periods of, (48) **1833**
  regulation at health resorts, (81) **1841**
  simplification of some, (105) 629
DIET, special, in hospitals, (100) 1260
  tuberculosis, (32) 480
  typhoid, (120) 400
  typhoid, arguments for and against increased, (46) **1498**
  typhoid, full, (72) 319
  typhoid, high calory, (53) **1107**
  typhoid, low caloric food values in, (106) **1668**
  typhoid, low caloric, values in, clinical experiments with, (106) **1667**
  typhoid, restricted, (73) 319
  vegetable, in infant feeding, (156) 486
  vegetarian, physiologic value of, **1087**
DIETETICS and policing of camps, (84) 864
  from modern standpoint, (65) 696
  institute for, **459**
  scientific, (105) 250
  simplified for general practitioner, (50) 552
  skin diseases and, (96) **1334**
DIETETIST, pediatrician as, (140) 1030
DIGESTION after operations on stomach, (142) **1751**
  and absorption in light of serology, (140) 707, (149) 1270
  and fever, (55) **1839**
  blood-pressure during, (43) **1191**
  cecum diseases causing digestive trouble, **1473**
  disturbances of, as factor in skin disease, (163) 1502
  Einhorn bead test for estimation of, (89) 1494
  gastric secretion during, (131) 1844
  immunity of intestine from, by alimentary enzymes, **670—E**
  ipecac in digestive disturbances in children, **1239**, (67) **1499**
  pathogenesis of disturbances, research on, (183) 873
  physiology of, **598—E**
  protein milk as corrective of disturbances in, **547—ab**, (2) 1324
  traced by vital staining, **1721**
  treatment of disturbances, (167) 1118
DIGESTIVE TRACT: See Gastro-Intestinal Tract
DIGIPOTEX, what is it? **614—P**
DIGITALIS, (156) 562, (86) 1748
  absorption of potent elements from infusions and preparations of, (84) 249
  action on different forms of heart disease, (140) 485
  bodies, emetic action of, (94) **319, 371—E, *499, 924—C**
  effect of strychnin and, on man, (40) **1833**
  influence on recuperation of heart after muscular exercise, (106) **1930**
  preparations, commercial, Austrian investigation of, **143—P**
  preparations, erroneous conclusions from recent pharmacologic studies of, (117) 1501
  series, glucosids of, tolerance of, factors determining, (54) 1922
  use and abuse of, (110) 698
DIGITOL vacules, **442**
DINING-ROOM, healthy employees in kitchen and, **1479—C**
DIONIN in cataract, **69**
DIORADIN again, **1553**
  connection of Bernheim and Dieupart with, **608**
  in surgical tuberculosis, year's experience of, (7) 699
DIPHTHERIA, antitoxin administration in, (33) **398**
  antitoxin, anaphylaxis following injection of, (5) 1031, (63) 1266
  antitoxin, immunizing doses of, value of, **147**
  antitoxin in, (139) 560, (98) 635, (65) 1266 (123) **1843**
  antitoxin in blood of patients with, after serotherapy, (76) 326
  antitoxin in epidemic cerebrospinal meningitis, (160) 1675
  antitoxin in nervous phenomena of, (111) 705
  antitoxin, intravenous dosage of, experimental research on, (102) **1749**
  antitoxin, no anaphylaxis to, (112) **1750**
  antitoxin refound in serum and proper dosage, (84) 1037
  bacilli, cultivation of, improved technic for, (50) 2070
  bacilli in secretions of nose and throat in infants with nutritional disturbances, (111) **1269**
  bacilli in urine, (77) **327**, (144) **871**
DIPHTHERIA bacilli, staining technic for, (90) 1268
  bacilli, tumors due to, (94) 1403
  bacteriologic diagnosis, (121) 1813
  bacteriologic diagnosis of, technic for, (115) 1196
  blood-pressure in, (92) 1037
  bread as vehicle for conveying, **380**, (56) 1266
  carriers, (5) 1918
  carriers, staphylococcus-spray treatment, **1544—E, *1876**, (23) **1919**
  control of, (55) 1580
  convalescents, bouillon culture of staphylococcus pyogenes aureus used in, and bacillus carriers, (58) **782**
  diagnosis of, improved technic, (120) 1719
  droplet infection in, experiments bearing on, (42) **1921**
  ear and nasopharynx, (59) 1580
  enteritis due to, (42) 402
  epidemic, circumscribed, (24) **625**
  epidemics in school-rooms, (96) **634**
  epinephrin in tetanus and, (26) **1926**
  face paralysis following, recovery under antitoxin, (97) 1195
  false membranes of, experimental production of, (23) 1925
  heart in, (57) 1580
  hemiplegia due to, (16) 1495
  hot air for, (48) **701**
  larynx, (58) **477**, (9) 1577
  larynx stenosis following, treatment, (45) 1833
  larynx stenosis originating from continuous intubation with, (176) 1753
  lungs, chronic, in woman of 62, (162) 562
  necropsy blood findings in, (186) 1753
  nose, in public schools, (56) 1580
  paralysis due to, (36) 1034
  pharynx, atypical, ***1412**
  prophylactic inoculation against, free, **761**
  prophylaxis, (113) 1115
  prophylaxis and early treatment, (114) **870**
  pseudomembranes in, spiral wire to remove, (148) **486**
  recurring, three attacks in eight months, (163) 1271
  respiratory tract, chronic, (39) **1331**
  septicemia, (5) 1324
  sore throat and, (130) 699
  stomach, and diphtherial onychia, (11) **1837**
  toxin, formation of immune bodies in human serum by intravenous injection of, (117) 407
  toxin, immunizing effect of small doses of, on guinea-pigs, (53) 1187
  toxin in blood in, (126) **1932**
  toxin reaction, intradermal, (115) 251
  vaccination against, **1720**, (58) **1986**, (32) **2069**
  vaccination against, v. Behring's, (45) **1839, 1896, 2051—E**
  vaccine, bacillus, **1461**
  vulva, recurring, (117) 705
  wound, and diphtheroid, (79) 1333
DIPILATORIES sold by Cunningham graduates, **1243—P**
DIPLEGIA, cerebrocerebellar, infantile, (1) **2066**
DIPLOBACILLUS infection of eyes, therapeutic action of various dyes in, (105) 1930
DIPLOCOCCI in gasserian ganglion in herpes zoster of brow in senile dement, (161) 1198
DIPLODIA zeae, effect on phosphorus compounds of maize, (74) 1107
DIPLOMAS in Germany, **64**
  in psychologic medicine at University of Cambridge, establishment of, **140**
  mill, attacks, **760**
  mill, Italian Physico-Chemical Academy, **770, 1480**
DIPLOSTREPTOCOCCUS, lymphadenitis, suppurative, acute, abdominal, due to, autopsy, (8) 1738
DISEASES, acute, diet in, (90) 1494
  bearing names of saints, (10) 401
  common, mistaken for tuberculosis, consideration of, (59) 1326
  duration of, stated on death certificate, for classifying causes of death, (21) 1831
  influencing growth, (136) 1329
  interneuronic synapse in, (7) 1836
  laws of physics as they affect vital processes and, (143) 408
  monthly incidence of certain, (123) 162

DISEASES, prevention of, vs. cost of living, ***1757**
  safeguarding America against, **759**
  scope of, (46) 944
  seasonal, and seasonal temperatures, (7) 1184
  transmission of, limitations of specificity in, **675**—E
DISINFECTANTS and disinfection, (27) 1395, (109) 1923
  coal-tar, toxicity studies with, (30) **695**
  phenol coefficient in standardization of, limitations of, (32) 695
  standardization of, (48) 398
  standardization of, report of Council on, **1316**—P
  sugar as local, (127) **1116**
DISINFECTION: See also Sterilization
DISINFECTION and disinfectants, (27) 1395, (109) 1923
  gaseous, of equipment in field, (53) **944**
  in measles, **930**—ab
  of rooms, **466**
  of schoolrooms, **388**—C, (45) 782
DISK, pupillary, *for correction of spheric aberration,* (145) 243
DISPENSARY abuse and its elimination by organization and application of sociologic methods, ***738**
  and day camp in relation to tuberculosis campaign, (81) 1107
  clinics, associated, of New York, a social force, (116) 698
  free, functions of, (22) 625
  tuberculosis, what is it? (47) 1670
  work in tuberculosis, results, (23) 317
DISSECTOR, blunt, for submucous septum resections, (134) 243
  tonsil, new, (136) 162
DISTEMPER, canine, (46) 627
  in horses, bacteriology and vaccine therapy of, (21) 1578
DISTRICT OF COLUMBIA medical news, **1548, 1967**
  state board January report, **1566**
DIURESIS, *induced, diagnostic,* (97) **90**
  pituitrin, and vascular conditions, (56) 1922
  question of, (116) **705**
DIU [illegible] and mode of 1676
DIURETIN in acute experimental nephritis, therapeutic value of, (6) **1979**
DIVERTICULITIS, (9) 940
  intestine, (50) 1833
  sigmoid, **1101**—ab
DIVERTICULUM, Meckel's, (129) 320
  Meckel's, and complications, (89) 783
  Meckel's, ileus due to, (13) 316
DIVORCE, increased facilities for, **298**
  tuberculosis, lung, not ground for, **1568**—MI
DOG, lung tuberculosis in, experimental, (23) 1578
DOHLE, leukocytic inclusions of, (58) **1188**
DOUCHE can and sterilizer, combination, portable, ***279**
  vaginal, abuses of, **1373**
DRAFTS, *morbidity from,* especially in barracks, (37) 1984
DRAINAGE, abdomen under various conditions of inflammation, (2) 555
  after surgical procedures, (30) 1492
  apparatus, suprapubic, new, ***514**
  ascites into saphenous *vein,* **1559**
  ascites through silver tube into subcutaneous tissue, (182) 563
  dependent, empyema with special reference *to feasibility* and importance of, (10) 1025, (15) 1258
  effect on health in New Orleans, statistical study, (16) 1837
  fecal, instrument for establishing, (15) **317**
  into cellular tissue without drains, (76) **950**
  intraocular, clinical and experimental researches on, (32) 1028
  muscle, sub-temporal, by silver wire drainage mats in congenital hydrocephalus, (7) **1105**
  of accessory sinuses in atrophic rhinitis, (100) 1581
  tampon, of abdomen, indications for and results, (145) 870
  transduodenal, of hepatic duct, (69) 1035
DRAKE-IOWA medical school merger, **619**
DREAMS and dreaming, (99) 1189
DRESDEN, university in, **1239**
DRESSINGS, nose, use and comparison of, (97) 698
DRINKING-CUP, individual, improvised, **1090**—ab
DRINKS, soft, sophistication of, **1308**—E
  summer, tonic, danger *in,* **1308**—E
DROP dosage, (55) 791
DROPSY, congenital, (68) **326**
  heart and kidney, medicinal treatment, (124) 1196
DROWNING, resuscitation from, literature on, **390**
DRUG action on nervous system, selective, *as aid to diagnosis,* **1484**—ab
  addiction, ***431**
  addiction, Lambert treatment for, **309, *1953**
  delirium caused by, diagnosis, (59) 1982
  deterioration, **1810**—P
  diet and action of, **2048**—E
  few, needed in treatment of disease, **1388**—ab
  fluorescent, enhancing action of, by Roentgen rays, (140) 252
  foods and, in 1912, **132**—E
  giving, principles of, (107) **559**
  in combination, factors which enhance potency of, (92) 406, (103) 1195
  journals, attitudes toward patent medicines, **837**—E
  peripheral action of certain, with *special reference to lungs,* (65) 1188
  standards, uniformity in, and uniform requirements in dispensing, plea for, (60) 241
  tariff changes on surgical instruments and, proposed, **1382**—ME
  therapeutic properties ascribed to ordinary, when put out under *fancy name,* **1466**—E
DRUGGIST Circular and fraudulent advertising, **837**
DRUGLESS medication, pills and other drugs versus, (39) **318**
DRUNKENNESS: See also Alcoholism; Inebriety
DRUNKENNESS, Wood's cure for, **229**
DUCT, arterial patent, (3) 1189
  arterial, persistent, its diagnosis by orthodiagraph, (14) 1258
  cystic, pain in, sign of typhoid, prognosis, (58) **247**
  hepatic, transduodenal drainage of, (69) 1035
DUKET tuberculosis cure, **1476**—P, **1646**—E
  tuberculosis cure giving results of some investigations, **1653**—P
DUMP, public, and public health, (15) 1492
DUODENAL catheter, findings with, in infants, (95) **1114**
DUODENOJEJUNOSTOMY after gastrojejunostomy, Murphy button to effect, (12) **317**
DUODENOTOMY for removal of impacted sewing machine needle, (64) 1326
DUODENUM, atresia of, (99) 1334
  contents, diagnosis of functional activity of pancreas by ferment analyses of feces and, (9) 1025
  gastric juice in cancer and nonmalignant disease of stomach and, (19) **1924**
  hat-pin in, (31) *1669*
  injury from contusion, operative treatment, (47) 947
  motility, (126) 1264
  papilla, systematic dilatation of, and draining common bile-duct into duodenum, (184) 563
  roentgenoscopy in diagnosis of disease of, (138) 1750
  roentgenoscopy, technic for, (80) 2072
  sound, (126) 407
  sound in pylorospasm, (115) 636
  spastic strictures in stomach and, milk differentiation of, (118) **1336**
  tube, its value as diagnostic and therapeutic agent, (96) 1667
  ulcer, (91) **697, 1374,** (118) **1404,** (83) **1748**
  ulcer and cholecystitis, diagnosis, (110) 1189
  ulcer, *complications,* **1573**—ab
  ulcer, diagnosis, (98) 1108, (60) 1586
  ulcer, diagnosis and prognosis, **1573**—ab
  ulcer, diagnosis by serial radiography, (87) 1667
  ulcer, etiology and morbid anatomy, **1573**—ab
  ulcer, hemorrhage from erosion of gastroduodenal artery by, fatal, **151**—ab, (31) 1832
DUODENUM ulcer in infants, (105) **1500**
  ulcer, non-surgical treatment, **1573**—ab
  ulcer of stomach and, (150) 1329
  ulcer of stomach and, diagnosis and treatment, (68) 1982
  ulcer of stomach and, differential diagnosis, (134) 85, (59) **1035**
  ulcer of stomach and, gastro-enterostomy of, influence on, ***881**
  ulcer of stomach and, in relation *to blood-vessel lesions,* (1) ***1979***
  ulcer of stomach and, operative procedure (152) 1329
  ulcer of stomach and, perforated, (21) 1109, (80) 1494, (129) **1501,** (32) **1832**
  ulcer of stomach and, perforated, omentum cuff for, (103) 1403
  ulcer of stomach and, perforated, treatment, (65) 1402
  ulcer of stomach and, scarlet red in, **1915**—ab
  ulcer of stomach and, secondary nature of, (151) 561
  ulcer, perforated, (58) 87, (7) 164, (121) 1264, (79) 1494, (42) **1265**
  ulcer, roentgenography of, **1374**
  ulcer, surgical treatment, **1574**—ab
DURA MATER, defects in skull and, to cover, (132) 637
  hemorrhage from various sinuses of, *muscle flap to arrest,* (109) 1842
DUST, mercury refound in air and, of rooms where mercury is handled, (167) 1198
  prevention of palliatives, (112) 1923
  tuberculosis bacilli in, determination of, (74) **1267**
DWARF, achondroplastic, cesarean section *in,* (9) 694
  family of, from defective development of cartilage, (58) 1193
  from disturbances of nutrition and from failure of growth instinct, **1362**—E
  growth from bone and muscle dystrophy, (74) 867
  metabolism, (52) **318**
DWARFISM, mitral, (9) **1836**
DYES, synthetic, cancer in *genitourinary tract of workers in,* (65) **632**
  therapeutic action of various, in diplobacillus infection of eyes, (105) 1930
DYNAMITE-CAP injuries to eyes, (142) 478
DYSENTERY, amebas, *free-living and* parasitic in relation to, **1824**—ab
  amebic, and tests for determining occult blood *in* feces, results, (91) **399**
  amebic, chronic, treatment, (50) 1497
  amebic, emetin in, ***664,** (61) 1111, **1896,** (40) **1984**
  amebic, ipecacuanha and emetin for, (14) 164
  amebic, subcutaneous injections of *emetin hydrochlorid,* ***1216**
  bacillary, in infants, **1389**—ab
  bacillus of, laboratory notes on, (29) 552, (101) 1397
  cases in state institutions, treatment, ***9**
  due to infection with entamoeba *histolytica,* treatment, ***38**
  flagellate, in children, (2) 864
DYSMENORRHEA, *(42) 1741*
  constitutional, therapeutic-differential diagnosis, (23) 1027
  metranoikter for sterility and, (57) 1982
  nature and treatment, (92) 1929
  organotherapy in, (78) 950
  relieved by nose treatment, **1736**—ab
DYSPEPSIA, appendix *in,* (21) 551
  chronic, when is operative treatment indicated in? ***714,** (63) 1834
  diagnosis, (48) **1580**
  fermentation, diastase content of feces with, (190) 563
  gastric, true and false, (34) 631
  gastro-intestinal, *(110) 1667*
  intestinal, acute, pancreatic ferments *in infants* in, (5) 1103
  intestinal, in children, (26) **1033**
  ovarian, (37) 1838
  painful, biologic interpretation and surgical aspects in, (39) 552
DYSPHAGIA from disease of larynx, relief of, (141) **486**
  tropical, (148) **1406**
DYSPITUITARISM, (30) **556**
DYSPNEA from spasmodic contraction of musculature of bronchi in spasmophilic diathesis, (131) ***1196,*** (120) **1931**
DYSTOCIA, contraction ring as cause of, (22) 1109, (12) 1744
  from excessively large infants, induction of premature delivery, (66) **1112**
  in relation to modern education, **616**
DYSTROPHIA, bone and muscle, dwarf growth from, (74) 867
  epithelialis corneas, (74) 1396
  muscular, progressive, and syphilis, (46) 1982
  of hair and nails, three cases in a family, ***27**

DEATHS

Abdelal, Alfred G., **536**
Abernathy, Lawrence Y., **1315**
Abney, George Warren, **536**
Adams, George Smith, **1011**
Addy, Henry G., **1315**
Aldrich, Albert Clinton, **535**
Aldrich, Ezra Barnes, **461**
Alexander, Clara Jane, **1315**
Alexander, Robert C., **386**
Allbee, Elmore S., **1722**
Allen, John Henry, **1808**
Allen, Richard Cox, **461**
Alsman, Stonewall J., **765**
Ambler, John Edgar, **847**
Ames, Robert Parker Mars, **535**
Amis, James M., **921**
Anderson, Peter, **1238**
Anger, Theophile, **1805**
Angle, Saul Brock, **847**
Archey, Leona M., **224**
Ardiel, Lancelot M., **1091**
Ardis, Isaac, **1376**
Armstrong, Joseph Walter, **101**
Arndt, Hugo R., **301**
Arter, Francis G., **386**
Ashbrook, Bryan B., **1376**
Ashton, W. W., **765**
Atkins, Price W., **921**
Austin, Charles Rollin, **536**
Aveline, Francis Xavier, ***1091***
Bacon, Edward Sawyer, **1315**
Bagwell, Alfred A., **1315**
Bailey, Edward Paul, **223**
Bailey, Gerard, **65**
Bailey, Leonard, **1556**
Bailey, Orla Stair, **302**
Baird, James Samuel Tazewell, **15**
Baker, Hugh, **1973**
Baker, Samuel B., **1898**
Baldwin, Jared Grover, **1315**
Baldwin, Thomas Clinton, **302**
Ballard, Henry Francis, **612**
Balliet, Louis B., **536**
Banker, Ernest Ensign, **681**
Barck, Gustav W., **1242**
Barclay, James, **920**
Barkley, Charles M., **847**
Barlott, Israel C., **1808**
Barnes, Algernon S., **1171**
Barnes, Benjamin Franklin, **1898**
Barnes, Thomas H., **2059**
Barr, Benjamin H., **1652**
Barry, John A., **680**
Barry, Joseph D., **224**
Barton, Edith, **847**
Bassell, William Benedict, **461**
Bayley, Norman Brigham, **847**
Beach, Edward C., **2059**
Beach, Eliza J., **65**
Beard, William Force, ***302***
Beattie, Jeremiah, **1652**
Bee, Isiah, ***302***
Beede, Joshua William, **1376**
Beemer, Louis T., **302**
Belknap, Edward B., **1723**
Belknap, Milton Colt, **1898**
Bell, Alexander Taylor, **921**
Bell, Robert Eddy, **301**
Bell, Samuel, **1315**
Bell, Samuel M., **461**
Bell, Simeon Bishop, **385**
Bellamy, Archibald Waite, **1012**
Bennett, Charles E., **1171**
Bennett, Hannah Russell, **536**
Bennett, Harry Raymond, **1171**
Bergen, Evert James, **302**
Bergengren, *Frederick* Wilhelm Alexis, **1012**
Bert, Eddy, **1556**
Bevier, Archibald McNeil, **847**
Bidie, George, **915**
Bigelow, Delno Merton, **847**
Bigelow, Jane Elizabeth, **1171**
Biggers, C. W., **461**
Billings, John Shaw, **846**
Binz, **459**
Birch, Thomas Gulick, **612**
Bixby, Ernest P., **1723**
Bjelland, Adolph O., **680**
Bjorkman, *John Per Gustaf,* **1723**
Black, William T., **536**
Blair, James Edward, **1011**
Blair, James S., **1242**
Blalock, Nelson Gales, **1011**
Blanchard, Harold B., **847**

Bliss, Arthur Ames, 1556
Bolton, William Stroud, 2059
Bonebrake, Andrew S., 1475
Bonner, *Thomas T.*, 1723
Booker, William P., 1315
Booth, James Fleet, 536
Borland, Peter, 921
Born, Charles, 1315
Bosley, James, 223
Bothfield, James Francis, 385
Bourland, Addison McArthur, 1475
Bowdish, Russell Clark, 847
Bowles, Edward Perry, 386
Boyd, Robert Dempsey, 302
Boyd, William H., 1898
Bradley, E. W., 847
Bradley, J. D., 1652
Bradner, William Batchelor, 302
Brady, John J., 1171
Brady, Sobieski H., 1011
Braman, Francis Nelson, 461
Brayton, Charles Erskine, 224
Brayton, William R., 1242
Brenner, Christopher, 1012
Brinley, Putnam, 1652
Bristow, *Algernon* Thomas, 1090
Brockway, Charles T., 536
Bronson, Miles Hall, 1091
Brooks, Edward Fletcher, 1898
Brower, Charles S., 765
Brower, Alfred James, 765
Brown, Benjamin Franklin, 1723
Brown, Elmer Ellsworth, 1898
Brown, Eugene Elam, 536
Brown, George A., 681
Brown, Henry William, 846
Brown, *Hiram D.*, 921
Brown, Justus Morris, 1091
Brown, Mary E. Metcalf, 224
Brown, William D., 612
Brown, William Herschel, 536
Bucke, Edward Pardee, 1091
Bundy, Azro Delos, 846
Bunn, Albert C., 142
Bunsen, Charles P., 1808
Burgen, Samuel Newton, 612
Burke, Jesse D., 1171
Burlington, *John A.*, 302
Bussman, Paul Frank, 143
Butler, Edward Everett, 1012
Byers, Leonard S., 1476
Cahill, George Stephen, 765
Cain, Joseph V. M., 1475
Calder, John G., 847
Callan, William James, 765
Calleja y Sanchez, Julian, 1152
Cameron, James Strong, 1171
Campbell, Daniel L., 847
Campbell, Lorne, 1242
Campbell, Robert, 1475
Campbell, Robert Hamilton, 1091
Campbell, William H., 681
Cann, William Richard, 1091
Capron, Arthur S., 1476
Cardona, U., 219
Cahart, Edward William, 1723
Carlton, Snider M., 1315
Carney, James Lester, 1808
Carolan, Eugene Joseph, 1011
Carpenter, Andrew Jackson, 2059
Carpenter, William Bazaliel, 612
Carpenter, William Riegel, 224
Carrington, George William, 681
Carson, George Thomas, 1475
Carson, John Wesley, 302
Carson, William Cowan, 1722
Carson, Willis Wallace, 302
Carswell, Thomas Janes, 846
Carter, John A., 1012
Carter, Marion D., 1315
Carter, Robert Lindsey, 1376
Cary, Ezra H., 1808
Casey, Edward Lawrence, 302
Catching, W. Wilroy, 1898
Chamberlin, Frank Warren, 1171
Charles Frank, 1808
Chase, John Winslow, 461
Chavasse, Thomas Frederick, 915
Cheeseman, *Byron Clifford*, 1315
Cheesman, John Passmore, 2060
Cheever, Benjamin, 680
Cherry, Frederick T. D., 1974
Chitwood, John Eberle, 680
Claiborne, Ruffin Cole, 1556
Clanton, William, 536
Clark, Coleman Nathaniel, 612
Clark, George Albert, 1091
Clark, Lorenzo D., 143
Clark, William Green, 612
Clarke, Mortimer Hall, 386
Clear, John, 1091
Clemens, James Edwin, 921
Cliffe, Daniel B., 535
Clifford, Ben Kissinger, 224
Clift, Frederic, 1091
Cloud, Abel S., 1652
Cobb, Joseph Warren, 1723
Coggin, David, 1652
Cohan, Francis Henry, 1012
Coleman, Daniel S., 765
Coley, Henry Clay, 1898
Collier, Albert V. D., 765
Collins, Albert Lawrence, 1091
Collins, John F., 1315
Coliyer, Juriah Fuller, 224
Conaway, James Anderson, 1171
Connelly, Henry M., 1475
Conner, John C., 765
Conrad, John Adam, 1723
Cook, William Valentine, 1012
Cooper, William E., 1898
Corey, George Washington, 1315
Cornish, Mary Bridges Beattie, 1556
Cornwall, Emma J., 1898
Cornell, William R. S., 765
Corson, Francis F., 611
Coveny, *Joseph T.*, 681
Covert, John W., 1723
Cox, Charles Bascom Wyckliffe, 1171
Cox, James Daniel, 920
Craig, *John Jay*, 1242
Cramer, Roland, 1974
Crane, Frederick Asa, 1974
Crawford, Cyrus David, 1652
Crawford, Henry Maclean, 1898
Creel, Milton Pinckney, 223
Cribbins, Frederick A., 1376
Criswell, Melville Hutchinson, 765
Cross, Hugh, 847
Cross, John T., 536
Crothers, Lewis Haines, 302
Crozier, James, 847
Crumpton, Hezekiah John, 1315
Culbertson, Scott, 920
Cummings, Charles Edwin, 536
Currie, Joseph J., 1376
Cutler, James Tucker, 1171
Curtin, Roland Gideon, 920
Dal, John W., 612
Daniel, Charles C., 224
Daniel, Thomas Jefferson, 2059
Darnell, Robert D., 921
Darner, Frederick William, 1376
Daugherty, Charles A., 1309, 1376
Davis, Charles Henry, 224
Davis, George W., 765
Davis, Joseph, 1315
Davis, Luther M., 1974
Davison, Rachael J., 65
Dawson, Rankine, 1808
Dearborn, Reuben Fletcher, 461
Decker, William Francis, 612
Delaterga, Joseph Manuel, 1723
Delgado, Jose Manuel, 1170
Denbo, William R., 1898
Derr, Hamilton Kemp, 681
De Trana, Joseph M., 681
Dew, Rush H., 921
Dickinson, Charles, 1652
Dickson, Herbert Edward Balmain, 1723
Dierking, Albert W., 385
Diers, Harry Frederick, 1315
Dietrich, Adolph H., 142
Dillon, John E., 1808
Dimler, Edward, 224
Dolph, Benjamin Van Etten, 1171
Donaldson, George Harper, 536
Donnelly, Peter, 223
Doolittle, Egbert D., 1315
Dorset, Joseph Warren, 1898
Dorsey, William A., 143
Dougan, William T., 1012
Douglass, Isaac W., 681
Downs, Edward L., 2060
Doyle, Thomas H., 846
Drake, Nelson Asath, 301
Drennen, Charles, 2059
Droge, John Herman, 1011
Drossner, Morris, 1898
Dryden, John L., 224
Dubois, John Coert, 1556
Duffell, Charles L., 224
Duffin, Alfred Baynard, 915
Duffy, James F., 681
Duhring, Louis Adolphus, 1555
Duncan, Augustus Meek, 1091
Dunlap, Charles O'Neil, 680
Dunn, Jesse T., 846
Dupee, Stradford Straus, 1171
Durham, Ulysses S., 1091
Duvall, John F., 765
Eastman, Robert Watts, 1652
Eastwood, William O., 1808
Eaton, Jesse A., 2060
Edwards, Eliphalet G., 1314
Edwards, John, 1242
Edwards, Pembroke S., 1556
Edwards, Robert Spearman, 1556
Egan, James A., 1090
Egan, James J., 65
Eggert, Frederick Charles H., 846
Eichelberger, James W., 846
Ellaby, Ernest M., 1973
Emerson, John Haven, 1652
Emery, Horace J., 536
Emory, Grenville A., 65
Engle, Walker Dannals, 536
Engleman, David, 1723
Epper, Peter, 302
Epstein, Ephraim M., 535
Etherington-Smith, R. B., 1472
Evans, Albert Job, 921
Evans, George W., 921
Evans, Roscoe, 2059
Faber, Carl, 1652
Faget, Charles A. A., 1012
Falls, Perry Wright, 847
Farleigh, Thomas John, 536
Farrell, George Louis, 224
Faucett, John Thomas, 847
Fauver, Edward E., 1315
Fede, F., 915
Fell, Alexander Gray, 1652
Fenn, Curtis T., 765
Fenwick, Joseph Benson, 1475
Ferrell, Henry Eugene, 142
Ferry, Herbert Work, 765
Fetherlof, Isaac Allen, 846
Fink, Austin Taylor, 1974
Finley, David N., 921
Finney, J. M., 2059
Fischer, George, 847
Flanagan, John T., 536
Fletcher, Arthur Stanton, 612
Flynn, James F., 1091
Follweiler, Robert D. E., 536
Folsom, Edwin, 1171
Forchheimer, Frederick, 1807
Ford, Royston, 224
Ford, Wilburn Walter, 224
Fordyce, Garrard, 1176
Foster, Emery Wendell, 1722
Foust, Isaac Henry, 536
Fox, Charles James, 1376
Foy, Michael Henry, 920
France, John Mill, 143
Francis, *John Richard*, 1898
Francis, Richard Pearce, 1171
Frank, Philip, 1237
Frank, Prof. Rudolph, 918
Frazier, James C., 681
Freeman, Holman M., 681
French, James Clement, 1170
Freutel, August John, 1898
Fry, Daniel Lafayette, 1091
Fulton, Israel W., 765
Furr, Leonard C., 2059
Gabbert, William A., 765
Gahm, Jacob T., 461
Galabin, Alfred Lewis, 1311
Gallagher, Patrick J., 1898
Gano, Richard M., 1170
Ganster, William Foster, 681
Garceau, Edgar, 1556
Gard, Brookfield, 681
Geddings, Henry Downes, 611
Gemmell, Sampson, 1472
Gentle, Doke, 302
Gibbons, Horace Joseph, 224
Gibson, James, 302
Gibson, Robert Christy, 765
Gilday, Walter C., 1973
Gildea, Patrick Frederick, 920
Giles, Alfred Baker, 143
Gilkerson, Milo J., 2060
Gillette, Myra Amanda, 1091
Gladden, Rogers Burns, 921
Glover, Allen Henry, 1012
Goddard, Clarence Brock, 1171
Goldmann, Simon, 302
Good, Jonas J., 1974
Goodfellow, Abram, 301
Goodman, Alexander Mansfield, 847
Goodrick, George Munsell, 1652
Goodspeed, Helen Amanda, 612
Gordon, Edwin R., 143
Gordon, James, 224
Gordon, Thomas G., 1808
Gosewisch, Walter R., 2060
Goss, John H., 1315
Gosweiler, Augustus Van Hoff, 846
Gottschalk, Franklin Benjamin, 1723
Grady John H., 1556
Graham, Benjamin Forbes, 611
Graham, Charles Gertrude, 143
Graham, Frank, 1376
Graham, Hamilton, 921
Gray, *James M.*, 386
Green, George DeWitt, 2060
Green, John Alexander, 143
Green, William Elza, 302
Greenshields, William, 1170
Gregg, Sparrow T., 536
Grier, Clarence Russell, 1012
Grimes, James M., 1898
Gross, William M., 143
Grossman, Frederick Andrew, 2059
Grove, William A., 302
Gue, Arthur E., 1012
Guerin, John, 142
Guerin, Lovett Taft, 2059
Guill, John L., 1091
Gumm, Jay, 461
Gunby, Hiram H., 1315
Guth, Edward Francis, 1315
Haag, H., 219
Haile, George W., 1723
Hale, Colwell D., 536
Hall, Francis Jenks, 2059
Hall, George Benjamin, 1242
Hall, J. A., 1315
Hall, William Irby, 1723
Hallock, Harry M., 1808
Hamilton, Royal Gray, 921
Hamilton, William C., 1723
Hanks, James, 65
Hanson, *George Franklin*, 385
Harbour, George L., 1898
Harding, David E., 1242
Hardman, Samuel M., 2060
Harmon, Horace Edwin, 681
Harrah, John M., 1315
Harris, James Edwin, 1314
Harrison, John Tyler, 1898
Hart, Edgerton Haskell, 1723
Hartt, Samuel Whitfield, 680
Hasbrouck, Josiah, 1171
Hasemeier, Jacob A., 65
Haskin, Charles H., 2059
Hatch, Theodore Lincoln, 1091
Hausneck, Frank A., 612
Hayes, Daniel William, 536
Hayes, John Alfred, 1091
Hayes, John D., 1012
Hazeltine, Charles S., 142
Hazeltine, Lewis Hayward, 1171
Head, Gustavus Philemon, 1973
Headland John, 765
Heffernan, Thomas Henry, 1723
Heller, Arnold, 761
Hendershott, Willie Waldo, 1803
Hendricks, *James L.*, 1091
Henry, Jesse Williams, 1723
Hensley, James T., 1376
Henton, Alvin T., 302
Hervieux, Benjamin, 385
Hesse, Amalia, 847
Heywood, George, 579
Hickman, George W. V., 847
Hiett, Francis M., 1475
Hildebrandt, Ernst, 1091
Hildebrandt, Owen F., 921
Hill, Harvey Daniel, 765
Hillweg, Charles A., 536
Hiss, Philip Hanson, Jr., 846
Hobson, John Anthony, 846
Hoch, William R., 681
Hoffman, Mathias A. T., 1723
Holland, Park, 1011
Holman, George Payne, 1898
Holmes, Charles B., 847
Holmes, William W., 765
Holt, Charles H., 1974
Holton, Joseph Alexander, 1011
Hoover, William C., 1476
Hoppin, William Warner, 301
Horn, Royal D., 1012
Horwitz, Orville, 385
Hougen, Ole T., 1808
Howard, Stephen, 921
Howard, William R., 224
Howe, Harman George, 1973
Hoyt, Eugene Frederick, 1898
Hubler, Simon, 1475
Huddleston, Reuben Harrison, 1808
Hughes, John Owens, 535
Hull, James Richard, 1475
Humiston, *Franklin G.*, 224
Hunt, Robert Stephens, 1723
Hunter, Duke Williamson, 1722
Hunter, Newton P., 461
Hurt, Peyton L., 847
Ilstrup, Francis O., 1376
Ingalls, George Hancock, 1652
Ingersoll, Mary A., 1242
Inghram, William Ray, 1652
Irwin, William Silliman, 1556
Isaacs, Archibald Ezekiel, 1011
Jaccoud, Sigismond, 1650
Jackson, Ames Messer, 536
Jackson, *Thomas M.*, 1315
Jacques, Hartley Spinney, 302
James, John Theron, 1652
Jameson, William Kirk, 1652
Jarboe, Joseph T., 765
Jarvis, Winfield S., 1898
Jefferis, Thomas Norvell, 2059
Jeffrey, George Clinton 681
Jenckes, George Washington, 536
Jenkins, Elias McKay, 1091
Jenkins, Thomas, 302
Jenks, Frank H., 142
Jensen, Walter August, 2059
Jerrolds, M. F., 302
Jewett, Walter Kendall, 921
Johnson, Frederick Charles, 1475
Johnson, *George W.*, 1242
Johnson, George William, 765
Johnson, Parley H., 1376
Johnson, Richard G., 461
Johnson, Richard Love, 1171
Johnson, William Elting, 142
Jones, Charles M., 1377
Jones, Frank Adelbert, 1011
Jones, Frank Seba, 224
Jones, Henry Woodward, 386
Jones, Thomas Spec, 224
Jones, William D., 1012
Jones, William H., 386
Judson, James H., 1556
Judy, May McClaren, 386
Juler, Henry Cundell, 1242
Jump, David William, 612
Kadison, Albert P., 705
Kahn, Herman, 1556
Kane, John M., 1808

Kantrovitz, Adolph, 765
Karn, Jacob, 1012
Karoly, Frank, 1808
Keener, Henry N., 1722
Keiser, Max, 65
Keller, George M., 224
Kemp, Simon Alexander, 1723
Kendall, William Samuel, 1376
Kennedy, Charles L., 223
Kent, James Marshall, 921
Kepler, Thomas S., 224
Kern, Henry William, 1242
Kierulff, Benjamin Franklin, 301
Kimball, Margaret Violet Covey Doane, 1974
Kimberley, Augustus Greene, 1012
Kimberlin, Jacob Elmer, 461
King, Albert Hazlett, 224
King, Benjamin D., 1011
King, Charles A., 1242
King, Frank James, 1556
King, Warren R., 1242
Kingsley, Virgil Corydon Taylor, 302
Kinnicutt, Francis Parker, 1555
Kissel, Jacob, 1475
Kitchen, Edward Elward, 1091
Kitchen, Joseph L., 1171
Kleven, Chester E., 1171
Kline, Charles Flint, 223
Knight, Charles Huntoon, 1556
Knight, Charles Milo, 1012
Kochenderfer, John H., 765
Koeller, Ferdinand, 847
Koons, Oliver H., 1475
Kopp, Prof., 2324
Koranyki, Frederic, 1972
Kuhn, Frederick William, 386
Kyger, John William, 1722
Labry, Paul Octave, 224
Lacy, John McClellan, 681
Laflin, Harvey B., 143
Lake, Daniel E., 1315
Lamb, Elmer E., 385
Lane, Charles James, 385
LaPointe, Jovite A., 1171
Latimer, Nannie May, 1171
Laub, Solomon Wexler, 2060
Lauder, Robert, 1973
Lawrence, Robert, 1808
Lawson, Wesley, 224
Leatherbury, Edward R., 1012
LeBeuf, Louis George, 1652
Lehman, John Lee, 847
Leith, Samuel S., 386
Leland, Matthew John, 1898
Lemen, Josephus Robert, 680
Leonard, John Wesley, 846
Leubbers, Alfred, 536
Lewellen, James, 302
Lewin, Berthold L., 536
Lewis, Granville R., 1242
Lewis, John V., 461
Lewis, Wade Allison, 535
L'Hommedieu, John Berry, 764
Liebig, Rosa Kleine Martin Upson, 1475
Liggett, George Samuel, 386
Lindsey, Rezin W., 1011
List, Joshua M., 1476
Litch, Wilbur Fisk, 536
Little, Eugenia Gordon, 1012
Little, Frank, 1242
Little, William Arthur, 846
Livingston, Henry F., 846
Lloyd, Jordan, 1471
Lloyd, Thomas S., 681
Locher, Henry Ellsworth, 680
Loing, Erasmus Darwin, 1475
Long, Merritt Allen, 921
Longan, Herbert Augustine, 143
Loper, Francis Marion, 1012
Loree, James Findlay, Jr., 536
Lott, James Howard, 2060
Love, Reuben D., 1091
Loving, Arthur Bascom, 681
Lowery, Elisha M., 143
Lundy, John Edgar, 1808
Lung, John A., 2060
Macaulay, George, 1475
MacDonald, John Mahon, 1652
Mackay, Adam, 681
MacKaye, Henry Goodwin, 612
MacLeod, Norman Keachie, 1242
Macrum, Robert Shuter, 920
Magee, Franklin J., 536
Magee, John Augustus, 1808
Magoris, Anthony Eugene, 1012
Manown, James Harvey, 1722
Maple, A. L., 302
Marcy, Thomas Knowlton, 1091
Marine, John W., 143
Marsden, Walter La Forrest, 1012
Marsh, Guy Carlos, 224
Martin, George, 1315
Martin, Richard E., 1171
Marvin, Matthew, 301
Massenburg, Richard Channing, 223
Massey, James Everard, 846
Masson, Joseph L. G., 1476
Maxey, William Cannon, 223
May, Edward Maurice, 302
May, Robert J., 921
McBride, Joseph Wesle
McCarthy, Thomas Henry, 1171
McCartney, Mary Elizabeth Edsall, 1577
McClellan, George, 1170
McCloud, William H. H., 2059
McClure, George White, 765
McClure, James, 1012
McCready, Samuel Ross, 1722
McCurdy, William C., 765
McDivitt, William E., 1723
McDonald, J. D. A., 2059
McDonald, John W., 921
McElroy, John J., 461
McElveen, George W., 1652
McElwee, Francis M., 847
McFarland, Joseph, 385
McGann, Michael Edward, 1652
McGrew, William Edgar, 461
McIntosh, James S., 2060
McIntyre, Charles W., 1652
McKee, Frank Lorenzo, 385
McKelvey, Alexander, 921
McKenna, James Charles, 302
McKinley, Lucien W., 1091
McKinnie, Ebenezer L., 681
McLaughlin, James H., 1808
McLaughlin, John T., 1012
McLean, Solomon C., 1808
McMahon, Frank Abraham, 1091
McMillan, Daniel I., 921
McMillen, W. W. P., 461
McMullen, J. W., 1723
McNally, Thomas Henry, 847
Mead, Francis W., 385
Mead, Julian Augustus, 1242
Meador, J. F., 461
Megrath, William Augustus, 847
Meredith, Thomas Overton, 612
Meredith, William Henry, 1652
Metzler, Samuel N., 536
Meyer, William, 765
Mickel, Frederic A., 1171
Mignault, Roch Samuel Moise 1808
Miles, Franklin P., 1808
Miller, Albert Eben, 1722
Miller, Amos B., 2060
Miller, Christopher C., 143
Miller, Eli Peck, 65
Miller, Henry Luther, 1723
Miller, Robert Hamilton, 847
Miller, Rogers Wright, 847
Millikin, James H., 921
Millspaugh, Theodore, 302
Mitchell, James Reid, Jr., 1556
Molkup, Frank C., 847
Molony, John H., 461
Monroe, Christopher M., 1376
Monroe, George W., 224
Monroe, S. Jean Stevenson, 1315
Monteiro, Manuel Garcia, 681
Moody, Milus L., 1476
Moody, Thomas, 920
Moore, Elmer Ellsworth, 681
Moore, Lee Roy, 1556
Moore, Mark W., 2059
Moore, Robert Alfred, 1012
Moore, Shelly C., 1898
Morehouse, Herbert Walter, 64
Morford, D. Durant, 1652
Morris, David G., 302
Morris, Thomas Nelson Watson, 1652
Morrison, John, 461
Morrow, Prince Albert, 1011
Morse, Alfred Irving, 536
Morse, Carl Goff, 1898
Moss, Robert Hugh, 65
Mothershead, Nathan G., 224
Mudd, James R., 385
Mueller, John Alexius Joseph 847
Muir, H. Skey, 1238
Mulhern, Thomas W., 1376
Murdock, Thomas Samuel, 386
Murphy, Richard Francis, 1723
Murray, Angus John, 1808
Murray, Robert, 223
Musgrave, Robert W., 847
Myers, Evans M., 1652
Neel, James D., 1091
Neff, John, 1974
Nelson, Hiram G., 681
Nelson, John DeWitt, 1898
Nelson, William S., 2060
Nelson, Wolfred, 385
Nesbitt, William Beattie, 612
Neville, James Alan, 681
Nichols, Charles F., 1315
Noble, Jacob L., 1556
Norris, James W., 1171
Norris, Louis E., 921
Oates, Wyatt Stephen, 1723
Oatman, Edward LeRoy, 143
O'Brien, Denis Aloysius, 1376
O'Brien, Keran, 302
O'Donnell, Edward Pius, 612
Ogden, Edward Russell, 1652
Ohnstad, Jens, 1974
Oliver, James Peter, 302
Olmsted, James B., 1722
O'Neal, John W. C., 1556
Orme, Francis Hodgson, 536
Osborn, Frank Pitman, 1091
Osgood, George Cowles, 765
Owsley, James H., 224
Pace, Jesse Mercer, 536
Pace, Williamson C., 1171
Page, Kingman B., 765
Pahl, Henry F., 224
Paine, Ernest Maynard, 915
Palmer, Ernest, 461
Parker, Edward H., 612
Parker, John Clement, 1808
Paschal, William Cosby, 302
Patch, William, 302
Patten, J. F. J., 386
Patterson, R. W., 1898
Patterson, William A., 461
Patton, William M., 224
Patton, William Rush, 1973
Patty, William, 536
Payne, Alrick T., 1723
Payne, James E., 1898
Paynter, Charles M., 1242
Pease, John Willett, 681
Peddy, George Washington, 1652
Peers, Theodore Wing, 1723
Peltier, Frank Hamilton, 1171
Pendleton, Lewis Smith, 1242
Penning, Oliver Parker, 224
Perkins, Ianthus Clyde, 301
Peterson, Charles Allen, 612
Peterson, Kate B., 612
Petrie, James Alexander, 461
Petterson, O. V., 219
Pettigrew, George Alexander, 2060
Pettit, Henry McEwen, 1808
Pfandhoefer, Louis, 536
Phillips, Abel P., 1242
Pickett, Albert G., 1652
Pierce, R. C., 1242
Pierce, Willard Ide, 301
Pillow, Raymond H., 301
Pitman, John, 1898
Pitman, William J., 142
Pocock, James M., 1556
Podvyssotzky, Prof. A., 915, 917
Pontius, Maria S. Gilmore, 681
Porter, Horace P., 143
Post, James Alexis, 1898
Potter, James H. L., 1012
Potter, Ziba Hazard, 1242
Potts, Franklin, 302
Potts, John S., 680
Powell, James N., 921
Power, Samuel John, 1171
Powers, George Herman, 1651
Pratt, Benjamin W., 1556
Preston, Frederick L., 1476
Price, Charles Wallace, 1556
Price, Robert John, 385
Prichard, Charles C., 1723
Priestman, John, 224
Proctor, Helen Paschall, 535
Proudfoot, Alexander, 385
Putnam, Joseph H., 1808
Quinby, Edgar C., 536
Quinn, James L., 386
Rabe, William Louis, 301
Raines, Robert Franklin, 1722
Ramsey, Walter Hardy, 921
Rannells, Jacob Newton, 1012
Ranney, Eugene Oliver, 1012
Rauch, Kimmel, 681
Reagles, James, 680
Reber, Mayberry S., 1171
Reddish, John, 461
Reed, Warren F., 1171
Reilly, Edmund A., 1651
Reece, William Isaac, 1012
Reese, William I., 1091
Reifel, John W., 1091
Relihan, Harry James, 1898
Reech, William Stewart, 143
Reppert, Lyell, 1974
Rether, Clarence Smith, 1242
Reynolds, George Edmund, 461
Rice, Eben Riley, 921
Rice, Howard C., 1315
Richards, Daniel, 1898
Richards, John Baxter, 847
Richardson, Samuel M., 1556
Richmond, Samuel, 1171
Riggs, Leroy S., 461
Riggs, Turner S., 1012
Ring, Allen Mott, 1974
Risk, J. Boyd, 1898
Ritchie, Parks, 461
Ritter, Henry O., 765
Roberts, Warren Franklin, 921
Robertson, James F., 921
Robertson, James W., 385
Robinson, Ezra A., 765
Robinson, Robert D., 1315
Robinson, Robert Preston, 1091
Rose, Preston Benjamin, 224
Rosenberger, Abraham S., 1315
Ross, Daniel Curley, 681
Rouse, Morris D., 1315
Ruble, Hiram Hunter, 1808
Rudicil, Robert Young, 224
Rugh, Wilson John, 1723
Runnion, Emma Ardelia Buck, 1377
Rust, David R., 1242
Ryan, Almon James, 1723
Ryker, Charles, 536
Saeger, Luther Jacob, 1171
Sager, Charles F., 302
Saloman, Richard Sigmonde Hau, 302
Sampson, William H., 1315
Sanborn, George R., 1652
Sandel, William, 612
Sanderson, George Hembree, 535
Sanford, Edward, 1012
Sappington, James Lovick, 1091
Saunders, G., 1311
Savard, Alfred Henry, 921
Sayler, Winfield Scott, 1475
Schmall, Octavius B., 1556
Schutt, Lewis C., 1808
Scofield, A. J., 921
Scott, Isaac W., 1376
Sellards, Archibald Borden, 1974
Sellew, Frederic Smith, 224
Sensenig Issac B., 612
Sewell, Silas George, 142
Seymour, Mason S., 681
Shaffer, Joshua Monroe, 1171
Shank, William Henry, 302
Shartle, John, 1012
Shastid, Thomas Wesley, 142
Shaw, Albert Clarence, 386
Shaw, N. Graham, 1091
Shaw, William H., 765
Shawgo, J. B., 764
Sheley Peter A., 1723
Shepard, Ernest Newton, 1723
Shepard, Lewis, 1898
Sheppard, Rodney Y., 681
Sherwin, Orlando Wood, 1476
Shibley, John Samuel, 1170
Shimer, William Henry, 1242
Shirley, Edward K., 301
Shockey, John W., 1898
Shollenbarger, William Luther, 1652
Short, John Latimer, 1723
Shortlidge, Evan G., 846
Shuey, William Andrew, 1898
Shupe, Marcellus B., 1170
Shurly, Ernest L., 1651
Shurtleff, Frank Atwood, 1377
Silberstein, Julius, 681
Silverberg, George Mark, 847
Sime, Malcolm Toland, 1091
Simmons, A. S., 681
Simon, Henry R., 1012
Sims, Jasper Newton, 386
Sims, Waine, 302
Six, Arthur G., 921
Skeel, Samuel C., 1091
Skidmore, Joseph R., 142
Sloane, Harry Francis, 1012
Slocum, Charles W., 1652
Small, Edward Hanna, 612
Small, Edward M.; 1808
Smallwood, Edgar W., 681
Smith, Augustus S., 1974
Smith, C. E., 921
Smith, Calvin Wesley, 681
Smith, Cecil Z., 1012
Smith, Eli James, 612
Smith, Ernest Byron, 65
Smith, Frank Pierce, 1475
Smith, George B., 681
Smith, George Belding, 536
Smith, Hamlin, 612
Smith, James A., 921
Smith, William O., 65
Snell, Franklin L., 536
Snively, James Clyde, 1898
Solatinaw, Joseph, 224
Sommerkamp, Ralph F., 224
Sorrels, J. W., 461
Sorrick, John William, 64
Souders, Samuel, 681
Spain, William B., 1556
Sparkman, A. P., 2059
Spear, Owen Crow, 2059
Spohn, Arthur Edward, 1651
Spranger, Francis X., Jr., 1171
Sprinkle, George W., 1315
Sproat, William Delano, 1012
Srofe, William Espey, 612
Stackpole, George Edmund, 1556
Staley, Amos Clyde, 681
Standing, William, 65
Stanley, Elmer Claude, 302
Stanley, Grant, 1171
Staples, George Allen, 1170
Stearns, Phineas Sewall, 1808
Stedman, Arnold, 1170
Steele, Minot A., 705
Steger, Leo John, 302
Stegman, Joseph E., 1012
Steinbach, Lewis W., 612
Sternlicht, Isaac, 1315
Stevens, Joseph De Weese, 1242
Stevenson, Clinton, 461
Stevenson, Samuel, 224
Stevenson, William Blaney, 143
Stewart, Hugh Angus, 1170
Stewart, Peter Breadalbane, 921
Stiles, Francis Winfield, 1723
Stone, David Franklin, 1722
Stoneburner, William A., 765
Storrs, Charles Francis, 921
Strauss, Conrad P., 1556
Strauss, Leon, 1012
Strong, Sylvester Emory, 1091
Stuart, Joseph Red, 302

Stubblefield, D. Rankin, **1242**
Stubinger, George L., **1376**
Stull, Thomas Hawkins, **386**
Sturgeon, Samuel H., **681**
Sturtevant, Charles, **461**
Stutzman, Harry A., **1315**
Sugg, John Fitz Herbert, **1091**
Sutton, Orlando Webb, **1556**
Swango, William, **1476**
Swanzy, Henry Rosborough, **1472**
Swartz, Douglas A., **65**
Symington, Thomas J., **1475**
Syrett, Edgar Charles, **385**
Tabor, James Atwood, **681**
Tainter, Paul R., **224**
Talbot, John Boyd, **461**
Talbot, Nicholas-Louis, **396**
Tavel, E., **219**
Taylor, Frank, **1652**
Taylor, George W., **612**
Taylor, Robert H., **1012**
Taylor, Thompson J., **1315**
Thibodaux, P. Edward, **386**
Thomas, Bruce, **1091**
Thomas, Carlton Revere, **1011**
Thomas, Frank Henry, **1012**
Thompson, Charles Lyman, **536**
Thompson, Frank William, **1898**
Thompson, Harriet Adaline, **1377**
Thompson, James Livingston, **920**
Thoms, Sharon John, **461**
Thomson, James, **2059**
Thorne, Walter Scott, **1556**
Tilbrook, John R., **1974**
Tiling, G., **219**
Tillman, William, **2059**
Timmins, Patrick Joseph, **1556**
Timmons, Isaac Whittington, **1315**
Titus, Willard H., **302**
Tock, Orson Wilson, **1898**
Tomlinson, Harry A., **1897**
Tomlinson, Joseph, **1808**
Torrence, James Monroe, **64**
Totten, M. Z., **536**
Towar, George Washington, **2059**
Townsend, Herbert L., **921**
Tracy, Evert Evertson, **1242**
Treganowan, Ambrose, **1011**
Treuholtz, Clarence Albert, **1475**
Trezise, John Davies, **921**
Trolinger, Henry J., **847**
Trotter, Richard R., **1242**
Trunnell, Philip G., **1376**
Turner, John Daniel, **2059**
Tuttle, James Percival, **535**
Underhill, William Webb, **681**
Unger, Charles W., **1808**
Upson, Henry Swift, **1556**
Van Brakle, James, **1376**
Vance, Asbury J., **1555**
Van Gieson, Ira Thompson, **1171**
Van Vorhis, Flavius Josephus, **680**
Vastine, George H., **1242**
Vaughan, Josiah J., **143**
Veeder, Andrew Truax, **302**
Von Bramann, **1806**
Von Valkenburg, Jacob, **1012**
Wadsworth, Sarah Josephine, **461**
Waggener, Edmond Arthur, **1652**
Wagner, Charles J., **2060**
Wagner, Edward F., **847**
Wagner, William Jacob, **386**
Waite, Lorenzo, **1091**
Wakefield, John Morse, **847**
Waldron, Thomas Claude, **2059**
Waldrop, Joseph G., **1012**
Walker, Alexander E., **1556**
Walker, Hiram Dana, **847**
Walker, John L., **1012**
Wallace, James, **1808**
Walters, Joseph W., **765**
Ward, Edgar Pearl, **847**
Ward, Lucius Cincinnattus, **65**
Ward, William Gomez, **1556**
Ware, M., **302**
Washburn, Edward Lyman, **681**
Washington, Edgar J., **921**
Washington, Samuel S. H., **921**
Waters, James W., **1808**
Watson, David Shewman, **847**
Watson, William Henry, **223**
Way, George C., **921**
Weathers, Lucien Y., **1242**
Weckslin, Charles, **1723**
Weeks, George Henry P., **2059**
Weir, Albert Sweeney, **1242**
Welliver, James Everson, **1011**
Welton, Robert Bradlee, **385**
Welty, Ephraim, **921**
Wessels, Silas Addison, **1974**
Whann, Walter Lawrie, **764**
Wheeler, Frank Raymond, **143**
White, James K., **1652**
White, Robert Parks, **1808**
White, Ulysses P., **765**
Whitman, Alvah F., **1376**
Whittaker, James Fisher, **1556**
Whitworth, Herbert, **2059**
Wickman, William Joseph, **1973**
Wiegers, Theodore L., **1091**
Wilcox, George Gordon, **1723**
Wile, William Conrad, **765**
Wilkinson, Guilford Dudley, **461**
Willard, Samuel, **1475**
Wille, L., **219**
Willett, Peter, **612**
Willetts, Charles Clark, **765**
Willey, Vernon Justin, **65**
Williams, George Alexander, **1556**
Williams, James Jeremiah, **765**
Willis, John Warren, **846**
Willson, Curtis R., **612**
Wilson, Charles Alonzo, **1808**
Wilson, Edward Adrian **760**
Wilson, Jesse E., **1011**
Wilson, LeGrande James, **142**
Wimp, J. Emmett, **536**
Winch, John Howe, **1242**
Winchester, Benjamin Thomas, **385**
Windsor, Bennett P., **1723**
Winkley, Jonathan Wingate, **386**
Winlock, Joseph Tully, **302**
Winnie, Ephraim, **921**
Winsborough, Joseph W., **385**
Winslow, Lyttleton Stewart Forbes, **1970**
Winter, Albert Henry, **65**
Winter, Artemesia Brumback, **386**
Winton, Charles F., **1011**
Wise, William H., **1171**
Wising, J., **219**
Witter, George H., **680**
Wocher, Charles Frederick, **1723**
Wolcott, Oscar O., **65**
Wood, W. Riley, **536**
Woodruff, Alpheus B., **847**
Woods, James McBride, **1556**
Woodson, Lyman R., **847**
Wormley, William, **612**
Wortham, Patrick Kelley, **1315**
Wright, Augustus R., **612**
Wright, Louisa Van Vleet Spicer, **1974**
Yeagley, John H., **65**
Yingling, Joel, **1376**
Young, John Calvin, **386**
Young, Joseph Coddington, Jr., **1242**
Zeigler, William L., **461**
Zimmerman, Gustave A., **1091**
Zoller, William, **1242**
Zurcher, Clarence W., **612**

E

EAR: See also Labyrinth
EAR, abscess of middle, acute, (50) 477
  abscess of outer, treatment, (130) **329**
  adenoids causing complications in, (131) 478
  affections of nose, throat and, including accessory sinuses, conservation in treating, (100) 320
  bacteriology of, (70) 1396
  bismuth paste in nose and, (101) 399
  cerebrum abscess originating in, (135) 706
  cholesteatoma of, (20) 81
  deafness due to disease of middle, (127) 162
  diphtheria of nasopharynx and, (59) 1580
  hot air and iodoform in conservative treatment of some conditions of nose and, ***1946**
  in typhoid, **1241**—ab
  internal, functional tests of, (50) 1985
  internal, suppurative disease of, (128) 1674
  Jarisch-Herxheimer reaction in, after salvarsan treatment, (14) 1537
  eye, nose, throat and, journals on, **1320**
  lobe, othygroma nephriticum, ***123**
  middle, disease of mastoid cells and, based on study of cases of diphtheria, scarlet fever and measles, (49) 696
  middle, disease, pseudodiphtheria bacilli in, (45) 790
  middle, fibroma or fibro-angioma of, (23) 81
  middle, inflammations, (99) 320
  middle, suppuration, acute and chronic, management of, (16) 780
  middle, suppuration and life insurance, (18) 81
  minor operations on nose, throat and, (137) 1300
  nose obstruction causing diseases of throat and, (39) 781
  operations, after treatment, (20) 165
  operations, under local anesthesia, (52) 1839
  outstanding, correction of, (70) 1840
  pain in, significance of, (11) 1495
  painful condition of, and diseases of posterior sinuses, (86) 399
  salvarsan from standpoint of, (56) 1982
  salvarsan in diseases of, (94) 1114
  salvarsan, influence on, **344**—ab, (82) 633, (169) **1118**
EAR, scarlet fever causing complications in, (91) 1587
  sexual apparatus in connection with nose, throat and, (112) 1030
  sounds in, (184) **1272**
  specialist, ethical problems confronting, (111) 1189, (107) 1328
  surgeon, needs of, in general hospitals, (146, 152) 1030, (15, 48,) 1395, (82) 1580
  syphilis, (14) 81, (111) 400
  tinnitus aurium, significance in certain diseases of, (131) 162
  tuberculosis, (48) 480
  Waldeyer's ring relative to, pathogenicity of disease of, (76) 1834
  Wassermann reaction and salvarsan in diagnosis and treatment of syphilis in affections of nose, throat and, (11) 81
  work in general practice, (37) 1110
  Yankauer treatment in tubotympanic trouble, (87) 1107
EARTHWORM, tumors, malignant, produced from parasites of, (102) **242**
EASTERN University of Medicine not recognized has graduates, **1905**
ECCENTRIC movements in muscular paralysis, (7) **786**
ECHINACEA, **69**
ECHINOCOCCOSIS, (59) 702
  liver, (76) 399
  lung, (158) 1502, (3) 1264
  serodiagnosis and, (101) 869
  seriodiagnosis of helminthiasis and, in general, (162) 1271
ECKMAN'S alterative, **1014**—P
ECK'S fistula, influence of phloridzin on dogs with, (77) 1028
ECLAMPSIA, (9) 85, (63) 160, (119) **706**, (17) 780, (7) **1031**, (69) 1158, **1487**—ab, (103) 1667
  abdominal, cesarean section in, (64) **944**, (32) **1186**
  an intoxication from excess of syncytium nuclei in blood, (174) **872**
  blood-changes in pregnancy kidney and, importance for treatment, (86) **868**
  cesarean section in certain cases of, (86) 1834
  convulsion in, suppression of, (41) **86**
  disturbances of carbohydrate metabolism in pregnancy and, (105) **1269**
  etiology, (81) 1189
  etiology and pathogenesis of, (103) 1029
  etiology and treatment, (13) **1668**, (85) **1834**
  expectant treatment, (141) 92, (70) **482**, (77) 1747
  influence of monsoon on, (23) **323**
  kidneys in, (74) **1194**
  magnesium sulphate, intradural injection of, in, (191) 873
  magnesium sulphate, no benefit from, (153) **1271**
  necrosis of cortex of kidneys, symmetrical, with suppression of urine and, (21) **1837**
  obstetrical and surgical treatment, (97) 783
  prophylaxis and treatment, (42) 477
  serotherapy of, (151, 152) **1117**
  surgical methods of dealing with, (28) 866
  treatment, (193) 873, (65) 1035, (153) **1117**, **1485**—ab, (127) 1836
  venesection in, improved technic for, (142) **638**
ECLECTIC Medical University of Kansas City, graduates of, go to Arkansas for license, **1887**—E
ECONOMICS, *instruction* in medical ethics and, **1168**
ECTROPION, *eyelid*, upper, Wolfe graft to correct total, (85) 1580
ECZEMA and some eruptions often mistaken for eczema, (12) 1032
  causation of, (64) **319**
  dermatitis, infectious, dermatitis repens and acrodermatitis perstans, possible interrelationship of, (37) **782**
  external origin of, particularly industrial eczema, based on study of 4,142 cases, (65) **319**
  face, in children, pathogenesis and therapy of, (15) 1664
  hands, recurrent, (70) 160
  in infants, **591**—T
  mouth, as manifestation of congenital syphilis, (24) **1330**
EDEMA, angioneurotic, (63) 1922
  colloid-chemical theory of nephritis and, ***345**, ***348**
  eyelid, (100) 399
  glottis, (75) **1580**
  liver, and nephritis, **602**—E
EDITORIALS, handful of, **2062**—ME
EDUCATION: See also Colleges; Schools; University
EDUCATION, certain elementary concepts in, applied to medicine, **1573**—ab, (58) **1742**, (25) **2067**
  duty of physician in, (28) 2067
  medical, (56) 552, **931**—ab, (85) 1029
  medical, American standard for entrance to medical colleges, **1003**—E
  medical, and Harvard medical school, (11) 860
  medical, and hospital, **775**—ab, ***974**
  medical, and medical profession, **776**—ab, **1389**—ab
  medical, and public opinion, **1002**—E
  medical, conference of American Medical Association on, **391**, **690**—ab, **774**—ab
  Medical, Council on, annual presentation of results of state board examinations by, **1623**
  medical, *discussed in Peking Medical* Conference, **1820**—ab
  medical, European side of, **690**—ab
  medical, function of Royal Medical Society in, (27) 402
  medical, higher preliminary qualifications assured, **756**—E
  medical, in Illinois, **524**—E
  medical, in Iowa, **601**—E
  medical, in Iowa State University, (71) 1834
  medical, increased cost of, **917**
  medical, million dollars for, **1801**—E
  medical practice and, necropsy in, past and present position of, ***1784**
  medical, preliminary and collegiate, necessity of readjustment of, **774**—ab
  medical, preliminary college year, **1016**, **1017**
  medical, present status of, **1096**
  medical, Pritchett's report, **755**—E
  medical, problem of, (11) 401, **931**—ab
  medical, problem of teaching general medicine, ***1049**
  medical, progress in, and University of Tennessee, **1014**—C
  medical, psychiatry in, ***1874**
  medical, psychology in, (67) 399
  medical, questions concerning, (121) 478
  medical, research in, value of, **1888**—E
  medical, rules and regulations governing, **935**—ab
  medical, should internship be required for graduation? **934**—ab, (74) 1922
  medical, should state medical boards require one or more years of college work? **933**—ab
  medical, state support of, **910**—E
  medical, teaching in higher institutions of learning, desirability of, (20) 1980
  medical, teaching psychiatry, ***1054**, ***1057**
  medical, third classification of medical colleges of United States, **231**
  medical, training of ophthalmologists, (5) 1393
  medical, university studies and three-year-term of military service, **1087**
  medical, work of Carnegie Foundation and the American Medical Association Council on Education, ***743**
  medical, work of full-time instructor, **387**—C
EDWARD'S olive tablets, **1378**—P
EFFICIENCY, medical, (16) 1026, (115) 1030
EFFUSIONS, pathologic, tryptophan-splitting ferment in, (83) 701
  pleural, with induced pneumothorax, (113) 951
EGGS, alimentary anaphylaxis to, (33) 1034
  hens', bronchial asthma due to hypersusceptibility to, (61) **399**
  nutrition of, of *schistosomum japonicum* and changes they undergo under action of various physical and chemical [illegible] (48) 1111
  [illegible] for pancreas
EINHORN'S bead test for estimation of digestion, (89) 1494
ELBOW, *ankylosis*, treatment, (161) 1732
  excision for tuberculosis, end-result, (14) 1104
  fracture, (140) 1592

Kantrovitz, Adolph, **765**
Karn, Jacob, **1012**
Karoly, Frank, **1808**
Keener, Henry N., **1722**
Keiser, Max, **65**
Keller, George M., **224**
Kemp, Simon Alexander, **1723**
Kendall, William Samuel, **1376**
Kennedy, Charles L., **223**
Kent, James Marshall, **921**
Kepler, Thomas S., **224**
Kern, Henry William, **1242**
Kierulff, Benjamin Franklin, **301**
Kimball, Margaret Violet Covey Doane, **1974**
Kimberley, Augustus Greene, **1012**
Kimberlin, Jacob Elmer, **461**
King, Albert Hazlett, **224**
King, Benjamin D., **1011**
King, Charles A., **1242**
King, Frank James, **1556**
King, Warren R., **1242**
Kingsley, Virgil Corydon Taylor, **302**
Kinnicutt, Francis Parker, **1555**
Kissel, Jacob, **1475**
Kitchen, Edward Elward, **1091**
Kitchen, Joseph L., **1171**
Kleven, Chester E., **1171**
Kline, Charles Flint, **223**
Knight, Charles Huntoon, **1556**
Knight, Charles Milo, **1012**
Kochenderfer, John H., **765**
Koeller, Ferdinand, **847**
Koons, Oliver H., **1475**
Kopp, Prof., **2324**
Koranyki, Frederic, **1972**
Kuhn, Frederick William, **386**
Kyger, John William, **1722**
Labry, Paul Octave, **224**
Lacy, John McClellan, **681**
Laflin, Harvey B., **143**
Lake, Daniel E., **1315**
Lamb, Elmer E., **385**
Lane, Charles James, **385**
LaPointe, Jovite A., **1171**
Latimer, Nannie May, **1171**
Laub, Solomon Wexler, **2060**
Lauder, Robert, **1973**
Lawrence, Robert, **1808**
Lawson, Wesley, **224**
Leatherbury, Edward R., **1012**
LeBeuf, Louis George, **1652**
Lehman, John Lee, **847**
line Samuel S., [illegible]cture, (165) 1118
ELECTRO-OXYGEN Institute of Omaha, **2060**—P
ELECTROTHERAPY, 50 years of, (69) **703**
ELEPHANTIASIS, bacillary, (59) 1402
labor in, (57) 1839
neurofibromatosis of foot with general neurofibromatosis, (8) 1491
operative treatment, (106) **328**
tuberculous, primary, of vulva, (121) **706**
vulva, cesarean section and panhysterectomy in, recovery of mother and child, (14) 479
ELIXER aromaticum as vehicle, **309**
Tonga compound, **1478**—P
EMBOLISM and thrombosis after appendicitis operations, (96) **869**
and thrombosis after gynecologic operations, (64) **1928**
during artificial pneumothorax, fatal, (69) **632**
fat, outside lungs, causes of, (134) 1750
gas, and production of artificial pneumothorax, (122) **1836**
gas, during prostatectomy, fatal, (43) 701
gas, from injection of air into bladder, fatal, (42) 701
lung, (65) 1493
lung, and spontaneous rupture of uterus, (19) 556
lung, operative treatment, **1473**
mechanics of, (133) 1270
mesenteric artery, temporary, ***513**
postoperative, fatal, (25) **81**
EMBRYO, pulsations in primitive heart of human, in second week, (10) **695**
transplantability of tissues to, of foreign species, (47) **1261**
EMBRYOLOGIC specimens, request for, **1655**—C
EMBRYOLOGY, human institute of, plea for, ***1599**
EMERY technic, modified for serodiagnosis, (128) 401
EMETIN, in amebic dysentery, (14) 164, ***664**, **917**, (61) **1111**, ***1216**, **1896**, (40) 1984
EMOTIONS, depressing influence on stomach secretions, (66) **1986**
mind in relation to, (5) 1668
EMPEROR, endowments in connection with anniversary of, **123**[illegible]
EMPHYSEMA, (125) 1501, (64) 19[illegible]6
and chronic bronchitis, (88) 158

McCarthy, Thomas Henry, **1171**
McCartney, Mary Elizabeth Edsall, **1577**
McClellan, George, **1170**
McCloud, William H. H., **2059**
McClure, George White, **765**
McClure, James, **1012**
McCready, Samuel Ross, **1722**
McCurdy, William C., **765**
McDivitt, William E., **1723**
McDonald, J. D. A., **2059**
McDonald, John W., **921**
McElroy, John J., **461**
McElveen, George W., **1652**
McElwee, Francis M., **847**
McFarland, Joseph, **385**
McGann, Michael Edward, **1652**
McGrew, William Edgar, **461**
McIntosh, James S., **2060**
McIntyre, Charles W., **1652**
McKee, Frank Lorenzo, **385**
McKelvey, Alexander, **921**
McKenna, James Charles, **302**
McKinley, Lucien W., **1091**
McKinnie, Ebenezer L., **681**
McLaughlin, James H., **1808**
McLaughlin, John T., **1012**
McLean, Solomon C., **1808**
McMahon, Frank Abraham, **1091**
McMillan, Daniel I., **921**
McMillen, W. W. P., **461**
McMullen, J. W., **1723**
McNally, Thomas Henry, **847**
Mead, Francis W., **385**
Mead, Julian Augustus, **1242**
Meador, J. F., **461**
Megrath, William Augustus, **847**
Meredith, Thomas Overton, **612**
Meredith, William Henry, **1652**
Metzler, Samuel N., **536**
Meyer, William, **765**
Mickel, Frederic A., **1171**
Mignault, Roch Samuel Moise **1808**
Miles, Franklin P., **1808**
Miller, Albert Eben, **1722**
Miller, Amos B., **2060**
Miller, Christopher C., **143**
Miller, Eli Peck, **65**
Miller, Henry Luther, **1723**
Miller, Robert Hamilton, **847**
Miller, Rogers Wright, **847** methods,
Millikin, James [illegible]
technic for, (42) 944, (84) 1747
tube, simple, advantages of, (79) 553
ENDOSTEUM, (121) **1270**
ENDOTHELIOMA, brain, frontal region of, large, (5) **1663**
lymph-nodes, (166) 872, (32) **1981**
undescended testis in male pseudohermaphrodite, (26) 1264
ENDOTOXINS and anaphylatoxins of typhoid bacillus, (33) **626**
ENEMAS, electricity in, (121) **251**
nutrient, containing simple digestion fragments, (100) 1749
ENERGOMETER and sphygmobolometer, (107) 1749
ENGLAND, medical organization in, **1657**—ME
ENOPHTHALMUS, traumatic, (57) 1586
ENTAMOEBA histolytica and entamoeba tetragena, identity of, ***1353**
histolytica, dysentery due to infection with, treatment, ***38**
histolytica seen in race of E. tetragena, budding and other changes described by Schaudinn for, ***1220**
tetragena, budding and other forms in trophozoites of, simulating spore cyst forms attributed to entamoeba histolytica, (3) **1979**
tetragena, cysts of, (17) **396**
tetragena, infection with, (74) 1262
ENTERITIS, catarrhal, resembling dysentery, whey in, (94) 1195
diphtheritic, (42) 402
embolic, acute, (79) **1747**
infants, diet in, (121) 400
ENTEROLITH: See Calculus, Intestinal
ENTEROPTOSIS: See also Gastroenteroptosis; Gastroptosis; Ptoses; Splanchnoptosis
ENTEROPTOSIS, fitness for military service and, (134) 485
operation for, (58) **160**
ENTOMOLOGIC research, **379**
ENURESIS: See also Urine, Incontinence of
ENURESIS of digestive origin, (41) **701**
treatment, (87) **249**
ENZYMES, alimentary, immunity of intestine from digestion by, **670**—E
blood, protective, as means of extracorporeal diagnosis, (89) 1396
concerned with formation of hydroxy acids from ketonic aldehyds, (81) 1028

Owsley, James H., **224**
Pace, Jesse Mercer, **536**
Pace, Williamson C., **1171**
Page, Kingman B., **765**
Pahl, Henry F., **224**
Paine, Ernest Maynard, **915**
Palmer, Ernest, **461**
Parker, Edward H., **612**
Parker, John Clement, **1808**
Paschal, William Cosby, **302**
Patch, William, **302**
Patten, J. F. J., **386**
Patterson, R. W., **1898**
Patterson, William A., **461**
Patton, William M., **224**
Patton, William Rush, **1973**
Patty, William, **536**
Payne, Alrick T., **1723**
Payne, James E., **1898**
Paynter, Charles M., **1242**
Pease, John Willett, **681**
Peddy, George Washington, **1652**
Peers, Theodore Wing, **1723**
Peltier, Frank Hamilton, **1171**
Pendleton, Lewis Smith, **1242**
Penning, Oliver Parker, **224**
Perkins, Ianthus Clyde, **301**
Peterson, Charles Allen, **612**
Peterson, Kate B., **612**
Petrie, James Alexander, **461**
Petterson, O. V., **219**
Pettigrew, George Alexander, **2060**
Pettit, Henry McEwen, **1808**
Pfandhoefer, Louis, **536**
Phillips, Abel P., **1242**
Pickett, Albert G., **1652**
Pierce, R. C., **1242**
Pierce, Willard Ide, **301**
Pillow, Raymond H., **301**
Pitman, John, **1898**
Pitman, William J., **142**
Pocock, James M., **1556**
Podvyssotzky, Prof. A., **915**, **917**
Pontius, Maria S. Gilmore, **681**
Porter, Horace P., **143**
Post, James Alexis, **1898**
Potter, James H. L., **1012**
Potter, Ziba Hazard, **1242**
Potts, Franklin, **302**
Potts, John S., **680**
Powell, [illegible], **339**, **860**, **1061**—E, **1246**, (73) 1262, **1811**—C
crotalin in lung tuberculosis and, action and administration of, (84) 1189
diagnosis, (56) 627
electricity applied to neck in, (62) **482**
heredity in, (16) **551**
hypertrophy of pharynx lymph ring as cause of, (93) 1494
in typhoid, (75) 1499
insanity and treatment, (69) 88
institutional treatment, **1380**
localized encephalitis of left motor cortical region with epilepsia continua, (38) **552**
mental manifestations of, (38) 1665
operative treatment, (107) 250
pathogenesis of, (151) 92
phosphorus in, (86) **1268**
prevention, (87) **84**
rachicentesis and epinephrin in, (166) 1675
remission in, (29) 787
respiration and circulation in, (43) **1833**
status epilepticus, gangrene in, death from sapremia, (133) 478
thyroid in, (52) **1034**
traumatic, after gunshot wound of head, (107) **1404**
treatment, (84) **1929**
EPILEPTICS, care of, in Illinois, **58**—E
marriage of, **2061**
EPINEPHRIN, (64) 1188, (96) 1189
action of hydrocele fluid and certain other pathologic liquids on objects used in biologic test for epinephrin, (36) 626
action of, in experimental kidney disease, (135) 1270
action of plasma and serum on certain objects used in biological test for, comparison, (35) **626**
action on coronary circulation, (27) **2069**
and hypophysis extract in therapeutics, (135) 1406
and meiostagmin reactions in diagnosis of cancer, (46) **1921**
and rachicentesis in epilepsy, (166) 1675
atropin or pilocarpin tests for autonomic nervous system in children, (121) 1931
colorimetric test for determining, new, (57) 318
destruction of constrictor substances of serum and, by oxygenation in blood-vessel walls, (96) 319

Sager, Charles F., **302**
Saloman, Richard Sigmonde Hau, **302**
Sampson, William H., **1315**
Sanborn, George R., **1652**
Sandel, William, **612**
Sanderson, George Hembree, **535**
Sanford, Edward, **1012**
Sappington, James Lovick, **1091**
Saunders, G., **1311**
Savard, Alfred Henry, **921**
Sayler, Winfield Scott, **1475**
Schmall, Octavius B., **1556**
Schutt, Lewis C., **1808**
Scofield, A. J., **921**
Scott, Isaac W., **1376**
Sellards, Archibald Borden, **1974**
Sellew, Frederic Smith, **224**
Sensenig Issac B., **612**
Sewell, Silas George, **142**
Seymour, Mason S., **681**
Shaffer, Joshua Monroe, **1171**
Shank, William Henry, **302**
Shartle, John, **1012**
Shastid, Thomas Wesley, **142**
Shaw, Albert Clarence, **386**
Shaw, N. Graham, **1091**
Shaw, William H., **765**
Shawgo, J. B., **764**
Sheley Peter A., **1723**
Shepard, Ernest Newton, **1723**
Shepard, Lewis, **1898**
Sheppard, Rodney Y., **681**
Sherwin, Orlando Wood, **1476**
Shibley, John Samuel, **1170**
Shimer, William Henry, **1242**
Shirley, Edward K., **301**
Shockey, John W., **1898**
Shollenbarger, William Luther, **1652**
Short, John Latimer, **1723**
Shortlidge, Evan G., **846**
Shuey, William Andrew, **1898**
Shupe, Marcellus B., **1170**
Shurly, Ernest L., **1651**
Shurtleff, Frank Atwood, **1377**
Silberstein, Julius, **681**
Silverberg, George Mark, **847**
Sime, Malcolm Toland, **1091**
Simmons, A. S., **681**
Simon, Henry R., **1012**
Sims, Jasper Newton, **386**
[illegible] Waine, **302**
EPITHELIUM, [illegible]
false transitions betwee[illegible]
intestine stenosis in newborn infant with rectum plug of mucus and, (82) 406
proliferation induced by injection of gas-works tar, (43) **86**
single layer of, between us and death, **367**—ab
urethra and testicles, beware of injuring, (66) 558
EQUINOVARUS, congenital, correction of, thirty-six cases, (61) **1396**
EQUIPMENT, gaseous disinfection of, in field, (53) **944**
ERGOT, application of active principles of, in obstetrics, (122) 1038
intravenous injection of morphin and, in hemoptysis, (118) 1843
potent elements in, (142) 408
ERISTALIS, myiasis due to, critical study of, (20) 1739
ERUPTION after use of copaiba, (69) 1840
as symptom of leukemia, (43) 1838
creeping, case suggestive of, **1481**
development in measles, new observations on, **1462**—E
ERYSIPELAS in infants, vaccines for, (88) 1189
latent, (95) 633, (91) **1195**
nystagmus, sympathetic, in, (68) 919
serotherapy of, (90) 1587
tattooing and, (111) 1930
treatment, (38) 1838
vaccine therapy of, (32) 700
ERYTHEMA multiform, bacillus causing, (122) 1749
nodosum, acute rheumatic orchitis associated with acute torticollis and, in child of two and one-half years, ***1608**
ERYTHROCYTES: See Blood Corpuscles, Red
ERYTHROMELALGIA, rhizotomy for, (76) 1840
ESCHERICH'S pseudotetanus, (152) 873
ESOPHAGOSCOPY and bronchoscopy, (38) 1402
and gastroscopy, new principle in, (7) 316
for detection and removal of swallowed foreign bodies, importance of, (138) **1590**
foreign body in esophagus removed by, (83) 1667
laryngoscopy and tracheobronchoscopy, direct, (26) 401, (13) 786
ESOPHAGUS, atresia, congenital, (4) 550

Stubblefield, D. Rankin, **1242**
Stubinger, George L., **1376**
Stull, Thomas Hawkins, **386**
Sturgeon, Samuel H., **681**
Sturtevant, Charles, **461**
Stutzman, Harry A., **1315**
Sugg, John Fitz Herbert, **1091**
Sutton, Orlando Webb, **1556**
Swango, William, **1476**
Swanzy, Henry Rosborough, **1472**
Swartz, Douglas A., **65**
Symington, Thomas J., **1475**
Syrett, Edgar Charles, **385**
Tabor, James Atwood, **681**
Tainter, Paul R., **224**
Talbot, John Boyd, **461**
Talbot, Nicholas-Louis, **396**
Tavel, E., **219**
Taylor, Frank, **1652**
Taylor, George W., **612**
Taylor, Robert H., **1012**
Taylor, Thompson J., **1315**
Thibodaux, P. Edward, **386**
Thomas, Bruce, **1091**
Thomas, Carlton Revere, **1011**
Thomas, Frank Henry, **1012**
Thompson, Charles Lyman, **536**
Thompson, Frank William, **1898**
Thompson, Harriet Adaline, **1377**
Thompson, James Livingston, **920**
Thoms, Sharon John, **461**
Thomson, James, **2059**
Thorne, Walter Scott, **1556**
Tilbrook, John R., **1974**
Tiling, G., **219**
Tillman, William, **2059**
Timmins, Patrick Joseph, **1556**
Timmons, Isaac Whittington, **1315**
Titus, Willard H., **302**
Tock, Orson Wilson, **1898**
Tomlinson, Harry A., **1897**
Tomlinson, Joseph, **1808**
Torrence, James Monroe, **64**
Totten, M. Z., **536**
Towar, George Washington, **2059**
Townsend, Herbert L., **921**
Tracy, Evert Evertson, **1242**
Treganowan, Ambrose, **1011**
Treuholtz, Clarence Albert, **1475**
Trezise, John Davies, **921**
Trolinger, Henry J., **847**
Trotter, Richard R., **1242**
Trunnell, Ph eradication of, **525**—E
  house, development of, **1169**—ab
  poliomyelitis, epidemic, transmitted by fomites and, (105) **635**
  sick children and, (73) **1987**
  which deposit eggs when they sting, **389**
FLINT'S murmur, causes of, (54) 1497
FLOOD districts, President Wilson rises to emergency in, **1079**—E
  situation, **1085**
  survey, sanitary, **1975**—C
FLORIDA medical news, **214**, **1467**, **1713**, **1967**
  state board November report, **79**
FLOUR and foods for diabetics, 922—C
  entire, wheat bread from bolted flour and from, 925—C
FLUIDS, body, and leukocytic bacteriolysin, (41) **1261**
  body, complement content in, (178) 488
  current, intra-ocular, proof of, based on principle of mechanical adaptability, (11) 1739
  current of eye, deficient results in experimental findings in, (10) 1739
  drying tissues and, new method, (30) **626**
  fetal, **274**—E
  hydrocele, action of, on objects used in biologic test for epinephrin, (36) 626
  organic, technic for removing albumin and determining residual nitrogen in, (139) 1116
FOERSTER operation for spastic paralysis, **1917**—ab
FOLIN and Macallum's uric acid reagent, composition of, **617**
  microchemical method of, for determination of urea in urine, (94) 1327
FOOD and drugs act, and Father John's medicine, **1316**—P
  and drugs act, proposal to remove restriction on use of decomposed vegetable substances, **1367**—E
  and drugs in 1912, work of Connecticut Agricultural Experiment Station in maintaining high standards, **132**—E
  antineuritic, **1543**—E
  bacteriologic examination of, special reference to gelatin, (34) 695
  chemistry of, (164) 163
  choice of, in disease, (113) **636**
  diabetic, **2052**—E
  diabetic, offered for sale in United States, ***2037**
  idiosyncrasy to common, (89) 161
  influence on incubation of hydrophobia, (118) **1589**

Willard, Samuel, **1475**
Wille, L., **219**
Willett, Peter, **612**
Willetts, Charles Clark, **765**
Willey, Vernon Justin, **65**
Williams, George Alexander, **1556**
Williams, James Jeremiah, **765**
Willis, John Warren, **846**
Willson, Curtis R., **612**
Wilson, Charles Alonzo, **1808**
Wilson, Edward Adrian **760**
Wilson, Jesse E., **1011**
Wilson, LeGrande James, **142**
Wimp, J. Emmett, **536**
Winch, John Howe, **1242**
Winchester, Benjamin Thomas, **385**
Windsor, Bennett P., **1723**
Winkley, Jonathan Wingate, **386**
Winlock, Joseph Tully, **302**
Winnie, Ephraim, **921**
Winsborough, Joseph W., **385**
Winslow, Lyttleton Stewart Forbes, **1970**
Winter, Albert Henry, **65**
Winter, Artemesia Brumback, **386**
Winton, Charles F., **1011**
Wise, William H., **1171**
Wising, J., **219**
Witter, George H., **680**
Wocher, Charles Frederick, **1723**
Wolcott, Oscar O., **65**
Wood, W. Riley, **536**
Woodruff, Alpheus B., **847**
Woods, James McBride, **1556**
Woodson, Lyman R., **847**
Wormley, William, **612**
Wortham, Patrick Kelley, **1315**
Wright, Augustus R., **612**
Wright, Louisa Van Vleet Spicer, **1974**
Yeagley, John H., **65**
Yingling, Joel, **1376**
Young, John Calvin, **386**
Young, Joseph Coddington, Jr., **1242**
Zeigler, William L., **461**
Zimmerman, Gustave A., **1091**
Zoller, William, **1242**
Zurcher, Clarence W., **612**

E

EAR: See also Labyrinth
  able? (6) [illegible]
FOREARM, different attitudes of, with various traumatic lesions, (61) 632
  fusing of bones of, (105) 1672
FOREIGN BODY, abdomen, (12) 322
  abdomen or neck, operative removal of undiagnosed, (56) 2070
  appendicitis associated with, (51) 477, (71) 1188
  bronchoscopy for recovery of nail occluding third bronchial ramus, (135) 1030
  bronchus, (83) 1667
  bronchus, pin embedded in, extraction of, (51) 1746
  cecotomy for removal of hairpin impacted in ascending colon, (20) 479
  coin in alimentary canal, (30) 700
  cornea and conjunctiva, removal of, (26) 1496
  cornea, treatment, (63) 83
  duodenotomy for removal of sewing-machine needle, (64) 1326
  duodenum, hat-pin in, (31) 1669
  esophagoscopy, (83) 1667
  esophagoscopy for detection and removal of, importance of, (138) **1590**
  esophagus, ***801**
  esophagus and respiratory tract, (131) 1932
  esophagus, technic for removal of, (68) 696
  eye, (133) 243, (40) 318, (86) 554
  eye, localization of, (127) 1673
  eye, magnet for removing fragments of iron from, (135) 243
  eye, six pieces of steel in enucleated eye, one piece found by Roentgen-ray, (84) 553
  eyeball, roentgenography of, (89) 554
  gastrotomies, six, on one woman for swallowed spoons and toothbrushes, (152) 1270
  gastrotomy with removal of 1149, (29) 317
  grape seeds in pelvic abscess, (126) 1826
  heart, toothpick in, (42) **1833**
  in soft parts, needles aid in locating, (82) 168
  intestines, (66) 1402
  intestines, feces with, (132) **408**
  lens, glass in eye 3½ years after accident, (12) 1739
  nail, travels of, (69) **1580**
  needles in abdomen as complication of hysterectomy, (23) 1033
  pneumonotomy for, (19) 479
  removal, technic for, (134) 637

EAR, scarlet fever causing complications in, (91) 1587
  sexual apparatus in connection with nose, throat and, (112) 1030
  sounds in, (184) **1272**
  specialist, ethical problems confronting, (111) 1189, (107) 1328
  surgeon, needs of, in general hospitals, (146, 152) 1030, (15, 48,) 1395, (82) 1580
  syphilis, (14) 81, (111) 400
  tinnitus aurium, significance in certain diseases of, (131) 162
  tuberculosis, (48) 480
  Waldeyer's ring relative to, pathogenicity of disease of, (76) 1834
  Wassermann reaction and salvarsan in diagnosis and treatment of syphilis in affections of nose, throat and, (11) 81
  work in general practice, (37) **1110**
  Yankauer treatment in tubotympanic trouble, (87) 1107
EARTHWORM, tumors, malignant, produced from parasites of, (102) **242**
EASTERN University of Medicine not recognized has graduates, **1905**
ECCENTRIC movements in muscular paralysis, (7) **786**
ECHINACEA, **69**
ECHINOCOCCOSIS, (59) 702
  liver, (76) 399
  lung, (158) 1502, (3) 1264
  serodiagnosis and, (101) 869
  seriodiagnosis of helminthiasis and, in general, (162) 1271
ECKMAN'S alterative, **1014**—P
ECK'S fistula, influence of phloridzin on dogs with, (77) 1028
ECLAMPSIA, (9) 85, (63) 160, (119) **706**, (17) 780, (7) **1031**, (69) 1188, **1487**—ab, (103) 1667
  abdominal, cesarean section in, (64) **944**, (32) **1186**
  an intoxication from excess of syncytium nuclei in blood, (174) **872**
  blood-changes in pregnancy kidney and, importance for treatment, (86) **868**
  cesarean section in certain cases of,
  in, (30) 81 (41)
  clavicle, splint for, (26) **781**
  closed, open or operative treatment of, American surgeon's opinions of, (47) 1497
  compound, articles on, **1246**
  compound, management of, (79) 1189
  compound, operative management of, (79) 864
  compound, treatment, (53) 1580
  defectively healed, (104) 483
  elbow, (134) **1030**, (140) 1502
  extension by Bardenheuer's technic versus Steinmann's nail technic for, (100) 1114
  femur, atrophic, typical, (83) 1333
  femur, end-results, report of commission on, (154) **243**
  femur neck, (136) 408
  femur neck, anatomic treatment, (1) 474
  femur, neck of both, (37) 789
  femur neck, treatment, (70) 944
  femur, open treatment, (92) 1396
  femur, paralysis following extension for, (72) **633**
  fibula or femur with large defect, (125) 1028
  foreign bodies in open operation for, (116) 85
  healed in abnormal position, operative correction of, (105) 1114
  heel bone, internal tubercle of, (38) 1926
  heel bone, posterior process of, (163) 1198
  heel bone, recent, (33) **1583**
  Hodgen's splint for, Brown's modification, **1248**—ab
  humerus, circular resection and suture of axillary artery for transverse laceration by, (143) 162
  humerus, lower end of, treatment, (13) **865**
  immediate treatment, (11) **1394**
  jaw, treatment, (79) 326, (106) 1403
  joints, (12) **1394**, (51) 1839
  joints, in or about, **73**—ab
  joints, in or about, passive motion begun early following, value of, (90) **161**
  knee-joint, including epiphyseal separation, diagnosis and treatment, **2023**—ab
  local anesthesia for reduction of dislocations and, (131) 569, (76) 2072
  long bone, (83) 1262
  long bones, operative treatment, (42) 240 (53) **627**

EDUCATION: See also Colleges; Schools; University
EDUCATION, certain elementary concepts in, applied to medicine, **1573**—ab, (58) **1742**, (25) **2067**
  duty of physician in, (28) 2067
  medical, (56) 552, **931**—ab, (85) 1029
  medical, American standard for entrance to medical colleges, **1003**—E
  medical, and Harvard medical school, (11) 860
  medical, and hospital, **775**—ab, ***974**
  medical, and medical profession, **776**—ab, **1389**—ab
  medical, and public opinion, **1002**—E
  medical, conference of American Medical Association on, **891**, **690**—ab, **774**—ab
  Medical, Council on, annual presentation of results of state board examinations by, **1623**
  medical, discussed in Peking Medical Conference, **1820**—ab
  medical, European side of, **690**—ab
  medical, function of Royal Medical Society in, (27) 402
  medical, higher preliminary qualifications assured, **756**—E
  medical, in Illinois, **524**—E
  medical, in Iowa, **601**—E
  medical, in Iowa State University, (71) 1834
  medical, increased cost of, **917**
  medical, million dollars for, **1801**—E
  medical practice and, necropsy in, past and present position of, ***1784**
  medical, preliminary and collegiate, necessity of readjustment of, **774**—ab
  medical, preliminary college year, **1016**, **1017**
  medical, present status of, **1096**
  medical, Pritchett's report, **755**—E
  medical, problem of, (11) 401, **931**—ab
  medical, problem of teaching general medicine, ***1049**
  progress in, and Univer- **1014**—C
  ulna, with of radius, (31) 1583
  ununited, Lane plate method and insertion of tibial bone plate in, (84) 1262
  ununited, treatment, (97) 242, (135) 401
  vertebra, laminectomy for, with necropsy, (149) 638
FRAMBESIA in Guam, prevalence of, and etiology of gangosa, (126) 401
  salvarsan in, (119) 484, (104) 1397
FRANK, Professor, death of, **918**
FRANK'S technic for subcutaneous symphysiotomy, (73) **1747**
FRAUDS, statute of, not involved in case made by physician, **396**—Ml
FREEZING, effect on typhoid vaccine, (20) **1027**
FRENCH Gynecologists, Obstetricians and Pediatrists, seventh annual meeting, **1373**
  physicians on visit, **1649**
FRENKEL treatment in tabes dorsalis, **927**
FREUD, views of Plato and, on etiology and treatment of hysteria, (15) 1577
FREUDIANS and imaginative literature, **767**—C
  school, excesses of, **307**—C
  theory of neuroses, Jung's modification of, (50) 862
FREUND, honors for Baccelli and, **297**
FRIEDMANN alleged cure for tuberculosis, is it a commercial or scientific proposition? **375**—E
  and patent of lung bacilli, (167) 487
  articles published by, **1173**—C
  disgraceful piece of commercialism, **1365**—E
  evading law, **1367**—E
  fair play for public and, **754**—E
  Institute, New York's action on, shows need of endowing Boards of Health with power to cope with such situations, **1800**—E
  method of treating tuberculosis, newspaper puffs for, **845**
  newspaper correctly classifies, **1713**—E
  New York clinics, report on one, (34) 2067
  personal impression of, **849**—C
  treatment and government, **672**—E, **1007**
  treatment for tuberculosis, **67**—C, **70**, **309**, **466**, **532**, **679**, (41) 782, 917, **1010**, (29) 1105, **1807**

FRIEDMANN treatment for tuberculosis, investigation of, (108) 1835
  treatment for tuberculosis, misapprehension as to novelty of, **753**—E
  treatment for tuberculosis, personal experiences with, (45) 1982
  treatment for tuberculosis, public health service investigation of, **1572**—ab
  U. S. senate asked to license, **1313**—ab
FRUITOLA and traxo, **1016**
FRUITS, bitter, artificial ripening of, **601**—E
  medicinal value of vegetables and, **147**
FUCHSIN, basic, in chronic leg ulcer, ***1680**
FULGURATION, effect of non-carbohydrate diet and, on transplantable rat sarcoma, **2021**—ab
  in bladder tumors, (14) **1395**
  papilloma of epiglottis, large, removed by, (85) 399
  ureter calculi, impacted, released by, ***1534**
FULTON diabetic compound, **225**—P, **384**—P
FUMIGATUS, sporulation of aspergillus niger and, (29) 1926
FUNGI, application of, as styptics, (5) 1108
  in sprue, rôle of, (23) 787
  particularly clitocybe sudorifica peck, pholiota, autumnalis peck and inocybe dicipiens bresadola, (66) 1188
FURUNCLE, to abort a, (95) **1988**
FURUNCULOSIS in infants, autovaccine therapy of, (156) **872**
  rational treatment, (114) **162**

G

GAG, mouth, with permanently attached tube for continuous etherization and new tonsil grasp, (111) 1328
GALACTOSE introduced directly into portal circulation, tolerance for, (101) 1749
GALL-BLADDER calculus, (19) 401
  calculus and uterus myoma, (52) 477
  calculus at Basel, (78) 1036
  calculus, chologen treatment of, **383**—P
  calculus, diagnosis, difficulties in, (60) 1326
  calculus, fibrin in, (175) 488
  calculus, ileus from, (118) 484, (131) **1589**
  calculus in common bile duct, technic for removal, (153) 1198
  calculus in common duct, diagnosis, ***171**
  calculus incision, technic for, (129) 1589.
  calculus, intestine obstruction due to, (11)
  calculus obstruction of common bile duct, (48) 2070
  calculus, operation for, (7) **1329**, **1474**, (180) 1676
  calculus producing pylorus and jejunum obstruction, (49) 1982
  calculus, radish juice for, (145) 1502
  calculus, removal, early, and preservation of gall bladder as prevention of disease of this and contiguous organs, (64) 160
  calculus, solubility of, (167) **1753**
  changes following autoplastic transplantation into gastro-intestinal tract, (50) **1187**
  Disease: See also Bile Tract
  disease, differential diagnosis, (65) 1028
  disease, etiologic factor in, (61) 1982
  growths in bile ducts and, (31) 1983
  hour-glass, (74) 1333
  how diseased may it be and still functionate? **314**—ab
  inflammation of, **770**, **928**
  mucocele of, (12) 1264
  myxosporidia in, in fishes, effects of, (7) 401
  perforation, acute, six cases, (11) 1982
  surgery, (84) 1402
  surgery of bile ducts and, technic, (66) 1834
GALL-DUCTS: See Bile-Ducts
GALL-STONES: See Gall-Bladder Calculus
GALVANISM of individual semicircular canals, nystagmus produced by, (38) 943
GALVANOMETER, filament, research on muscles with aid of, (128) 485
GANGLIA, spinal, cultivation in vitro of, (31) 947
GANGLIONITIS, posterior, acute, herpes zoster is the eruption in, ***1691**
GANGOSA, and tropical hygiene, **1797**—E
  frambesia in Guam, prevalence of, and connection with, etiology of, (126) 401
GANGRENE, amputation for, technic for, (94) 559
  appendix, (5) 555
  appendix and coil of small intestine, operation, recovery, (4) 555
  arteriovenous anastomosis in, (61) 166
  balanitis due to, (61) 404, ***1769**
  contagious, new, in white rats, (47) 1982
  diabetic, of lower extremity, conservative treatment, ***1126**
  finger, spontaneous, and symmetrical gangrene, (70) 1035
  foot, arteriovenous anastomosis for threatened, **2024**—ab
  foot, diagnosis and treatment, (105) **1588**
  from paralysis of vessels following exposure to moderate cold, (155) **1675**
  hernia with combined anastomosis and fistula operation for, (26) 700
  in status epilepticus, death from sapremia, (133) 478
  incipient, treatment, (148) **1117**
  intestine from non-penetrating bullet wound, (62) 477
  lead carbonate salve cause of, (41) 1497
  leg, in infant 11 days old, amputation, recovery, (25) 1191
  lung, (119) 1749
  of ileum complicating appendicitis, (36) 81
  operative treatment of impending, (69) 558
  spontaneous, and allied conditions in orthopedic surgery, (6) **859**
  spontaneous, measures to reduce viscosity of blood in, (113) **1404**
  thigh, entire, and retroperitoneal rupture of appendix with extravasation of pus into, ***1782**
GAPES (syngamus) in man an *occasional helminthic infection*, (29) 556
GARBAGE: See also Refuse; Waste
GARBAGE and sewage disposal in Germany, (44) 1395
  disposal, **1239**
  disposal by reduction method, (27) 239
  kitchen incinerator, construction and use, (55) 944
  piggeries, (26) 239
  systems of collection and disposal of, in New Orleans, (24) 239
GAS embolism and production of artificial pneumothorax, (122) **1836**
  embolism during prostatectomy, fatal, (43) 701
  embolism from injection of air into bladder, fatal, (42) 701
  explosion, in mining, danger from, (211) **874**
  metabolism of bacteria, (72) 161
GASOLINE *fumes, toxic effects of*, (74) 697
GASSERECTOMY, (70) 697
  medical, ***1355**
GASSERIAN GANGLION, alcohol injection into, in trifacial neuralgia, new method of treating, ***1354**, **1725**—C, (59) **1840**
  anesthesia by blocking, (84) **483**
  diplococci in, in herpes zoster of brow in senile dement, (161) 1198
  herpes of brow with bacteria in, (68) 1840
  neuralgia from calcification of, **183**—ab
GASTRALGIA nervosa, differential diagnosis, *(53) 1493*
GASTRECTASIS, (148) **330**
  acute, (5) **158**
  acute, following cesarean section, (4) **158**
  acute postoperative, (73) 399, (133) **408**, (78) 944, (28) 1186
  removal of gastric contents, starvation and rest in bed for, ***1859**
GASTRECTOMY, partial, in combined tuberculosis and cancer of stomach, (5) **1738**
  total, (89) 1268
GASTRIC JUICE, acidity of, blotting-paper test for, (63) **1035**, (85) 1037, (85) 1747
  anaphylaxis to, (56) 948
  bound chlorin in, especially with stomach cancer, (92) 1403
  during digestion, (131) 1844
GASTRIC JUICE, hydrochloric acid of, **284**—E
  hydrochloric acid of, behavior of, during kidney disease, (204) 874
  in cancer and non-malignant disease of stomach and duodenum, (19) **1924**
  hyperacidity, causation and treatment, (2) 1923
  influence of, on other living tissues, (97) 869
  peptolytic power of saliva and, special reference to diagnosis of cancer, (19) **158**
  why living tissue is not digested by, (61) **1333**
GASTRITIS: See Dyspepsia
GASTROCOLOPTOSIS, (6) **316**
GASTRO-ENTEROPTOSIS: See also Enteroptosis; Gastroptosis; Ptosis; Splanchnoptosis
GASTRO-ENTEROSTOMY and stomach resection, indications and technic in, (20) **695**
  button in, advantages of (68) 702
  chronic vicious circle after, especially with incarceration of loop in slit in mesocolon, (97) 483
  for peptic ulcer, after-history, (6) **1108**
  influence on stomach and duodenum ulcers, ***881**
  internal fistulas after, (101) 1114
  jejunocolic fistula from peptic ulcer in jejunum after, (51) 867
  on infant thirteen days old, (34) 1191
  permeability of the pylorus after, (163) **708**
  pylorospasm with stomach tetany cured by, (87) 1922
  technic, ***511**
GASTRO-ESOPHAGOSCOPE, new, (86) 83
GASTRO-INTESTINAL TRACT, alpha and omega of, in newborn infant, (10) 1324
  and heart disorders, (30) 1033
  atherosclerosis, experimental, (168) 1753
  bacteriology of, (5) **1190**
  coin in, (30) 700
  diseases of, complicating pregnancy, (135) 099
  diseases of, newer teachings of, (92) 399, (55) 552, (71) 863, (98) 1189, (73) 1493
  disturbance in children due to constipation, (66) 160
  disturbances of infants, classification of, (122) 1931
  disturbances of infants, heat factor in, (38) 1395
  dyspepsia, (110) 1667
  hemorrhage, treatment, (48) **1585**
  hemorrhage, unusual forms, (87) **1929**
  influenza, (52) 552
  Intoxication of: See Intestine, Intoxication
  iodin for mucosa in operations, (138) 1197
  occult blood in, (67) **1036**
  operative treatment, indications for, (62) 325
  ozone in, therapeutic action of, (64) 1035
  palpation and roentgenoscopic control of, (79) 249
  paralysis, postoperative, (62) 1035
  permeability of, for alien albumin in sick infants, (115) 1404
  physiology and pathology of, (53) 2070
  reflex influences from, on blood-pressure, (89) 1672
  roentgenoscopy in diagnosis of lesions of, value of, (45, 53) **82**, (83) 864, (30) 1186
  roentgenoscopy in functional nervous disorders, value of, **1911**—ab
  surgery, internal medicine findings as guide to, (125) 407
  symptoms, puzzling, ***1357**
  therapy, (72) 1742
  tonus in, **1101**—ab
GASTROJEJUNO - ESOPHAGOSTOMY, Roux, modified technic for, (102) **951**, (40) 1497
GASTROJEJUNOSTOMY, duodenojejunostomy after, Murphy button to effect, (12) **317**
  method of performing, (7) **1108**
GASTROPEXY by ligamentum teres, (165) 562
GASTROPHILUS and creeping eruption, **1481**
GASTROPTOSIS: See also Enteroptosis; Gastroenteroptosis; Ptosis; Splanchnoptosis
GASTROPTOSIS and coloptosis transversa as seen from post-mortem examinations, (81) 1922
GASTROPTOSIS, operative treatment, (138) 952
  position of stomach in relation to certain aspects of, ***421**
GASTROSCOPY and esophagoscopy, new principle in, (7) 316
  technic for, (139) 1590
GASTROSTOMY, Jianu-Roepke, and plastic esophagus operation, modified technic for, (119) 1038
GASTROTOMY, hair cast of stomach with (33) 631
  six, on one woman for swallowed spoons and toothbrushes, (152) 1270
  with removal of 1149 foreign bodies, (29) 317
GATLIN Institute, **1092**—P
GAUZE as a scarifier in vaccination, **1318**—C
  sponges in laparotomies, **226**—C
GELATIN, antigen separated from nucleoprotein of plague bacillus by filtration through, attempt at, (21) 1744
  bacteriologic examination of, (34) 695
  in acute and chronic suppuration, **519**—ab
  influence on coagulation of blood, (110) **1115**
  tetanus from, **1366**—E
GENERAL news, **61**, **139**, **218**, **296**, **379**, **457**, **678**, **759**, **843**, **915**, **1006**, **1085**, **1165**, **1237**, **1311**, **1372**, **1471**, **1551**, **1649**, **1717**, **1804**, **1893**, **1969**
GENITALIA and appendix, (65) 1927
  biochemistry of female, (61) **319**
  cancers and myomas of breast and, roentgenotherapy of, (87) 1841
  cancers, primary, multiple, in women, (74) 1747
  developmental defect of female, (18) **164**, (85) 629
  diseases of, in female insane, diagnosis and operative treatment, (13) 396
  functions of ductless glands in female, (35) **1265**, (10) **1330**, (20) 1399, (14) 1582
  iodin application to external and internal, in women, **151**—ab, (7) **695**
  malformation of, and displacement of kidney, (177) 562
  myoma and tuberculosis of, in female, (121) 1589
  prolapse, influence of spina bifida on, (59) 398
  reflex tenderness with inflammation *of female, (140)* **1197**
  tuberculosis in female, management of, **1101**—ab
  tumors, serodiagnosis of pregnancy and, (87) **950**
GENITO-URINARY TRACT, cancer, in workers on synthetic dyes, (65) **632**
  diseases, differential diagnosis, (116) 162, (25) 1027
  exudative diathesis in mucosa of, manifestations of, (107) 1195
  infection by micrococcus catarrhalis, (80) 944
  roentgenoscopy of *diseases, advancement in*, (31) 1027
  surgery done in Vienna and Berlin, (159) 162
  surgery, modern, points for practitioner, (32, 33) 1400
  tuberculosis *from general practitioner's standpoint*, (7) 2066
  tuberculosis in women, (46) 480, (116) **1115**, (31) 1325
  tuberculosis, paths of infection in, (20) **865**
  tuberculosis, tuberculin in, (97) **1923**
  tumors, in aniline-dye workers, **206**—E
GENIUS and errors of refraction, **1562**—ab
  literary, and manic-depressive insanity, (77) 628
GENTIAN violet, bactericidal action of stains closely allied to, selective, (38) 1260
GENU-VALGUM, (104) 1672
  among Arabs, rarity of (95) 793
  in small children, (23) **700**—ab
GEORGIA homeopathic May report, **1826**
  medical news, **135**, **454**, **1162**, **1368**, **1467**, **1967**
GERMAN chemical interests, toward improvement in scientific organization, obstructive attitudes of, **1229**—E

GERMAN convention on internal medicine, (63) **1720, 1806**
  medical dictionaries, **541**
  medical study tour, this year's **1010**
  pharmacopeia and protection against deadly bichlorid, **1083**—E
  surgery, (83) 1029
  Surgical Association, annual meeting, **1312, 1374, 1473**
GIANT CELLS in thyroid and prostate, (119) 1270
  stellate inclusions in, (120) 1270
GIGANTISM in children, conditions resembling, (119) 407
GILLIAM operation for uterus suspension, (14) 694
GIRARD treatment for seasickness, **1903**
GLANDS and lymph-node, **1560**
  ductless and diabetes, (61) 1028
  ductless, examination of, in dementia praecox, (31) **861**
  ductless, genital functions of, in female, (35) **1265**, (10) **1330**, (20) 1399, (14) 1582
  ductless in gravid uterus, (68) 1747
  ductless, works on, **1016**
  submaxillary, infection of, (43) **246**
GLANDERS, conjunctival reaction for, (39) 1106
  laboratory diagnosis, (27) **476**
GLASSES, colored, for hunting and as protection against snow and other light, (90) 554
  grinding, progress in, (60) 404
  prescribing, (60) 553
GLAUCOMA, (85) 553
  antiglaucomatous operations, new, (92) 554
  chronic effect on central retina blood-vessels, (35) 1028
  diagnosis and present methods of treatment, (54) 1833
  hemorrhagic, pathology of, (14) 1664
  origin of, (159) 92
  surgical treatment, (149) 243
GLENARD'S DISEASE: See Splanchnoptosis
GLIOMA, brain tumors with special reference to pathology of, (9) 629
  cerebellum, operation, recovery, (51) 1921
  in frontal lobe, large, (46) 1926
  pia mater, diffuse, (1) 1663
GLIONEUROMA, ganglionic, of optic nerve, ***363**
GLOBIN, caseinate, antigenic properties of, (24) 1578
  caseinate, preparation and properties of, (59) 318
  refractive indices of, (53) 318
GLOBULINES, antidiphtheric, and antidiphthericum serum, **1074**
GLOSSINA MORSITANS, development of, trypanosoma rhodesiense in, (9) 401
  influence of meteorologic conditions on development of trypanosoma rhodesiense in, (6) 243
  traps, (6) 1397
GLOTTIS, edema of, (75) **1580**
GLOVES: See Rubber Gloves
GLUCONEOGENESIS, chemistry of, (32) 626
GLUCOSE in urine in diabetics, action of lactic acid bacilli on percentage of, (87) **477**
  wins in Supreme Court decision, **1307**—E
GLUCOSIDS, digitalis series, tolerance of, factors determining, (54) **1922**
GLUTEN flours, dangerous, and diabetes, **909**—E, **922**—P
GLYCERIN, sterilization of, (86) **2072**
GLYCOGEN and diastase of animal tissues, (48) 318
  in liver, modification of, after intravenous injection of cholin, (122) 952
  mobilization of, (106) 1037
GLYCOSURIA, (7) *1264
  and inanition in infants, (71) **2072**
  epinephrin and alimentary, in exophthalmic goiter and subsidence after resection of thyroid, (102) 559
  epinephrin, pancreatic juice in, modification of, (148) 1502
  internal secretions and, (137) 1932
  in tuberculous meningitis, (37) **402**
  non-diabetic, and diabetes in one person, (58) 1839
  ozone in, (54) **1332, 1559**
  pneumaturia and apparent subsidence of, in diabetes mellitus with bladder disease, (149) 1674
  with cirrhosis of liver, (247) 252
GLYCYLTRYTOPHAN splitting agent in human saliva, (17) **158**
GLYOXALASE, (49) 1635
GOITER: See also Hyperthyroidism; Thymus; Thyroid
GOITER, (82) 697, (119) **1115**, (103) **1189**, (149) 1329
  aberrant, (171) 1272
  and hyperthyroidism, (141) 1030
  and its structural and physiologic units, (87) 1396
  blood-picture with, (49) 1839
  drinking-water origin of, arguments against, (124) 1116
  endemic, **751**—E
  endemic, and radio-activity, **1798**—E
  endemic, and radio-activity of drinking water, no probable connection between, (104) 1749
  endemic, etiology of, (21) 556, (26) **631**, (25) **787**
  endemic, in Bavaria, (73) 167
  exophthalmic, (76) 1402
  exophthalmic, alimentary and epinephrin glycosuria in, and subsidence after resection of thyroid, (102) 559
  exophthalmic, and perverted thyroid secretion, high-frequency electricity in treatment, (1) **694**
  exophthalmic, atypical, (2) **699**
  exophthalmic, clinical and pathologic aspects of, (115) 478
  exophthalmic, histology of, (146) 561
  exophthalmic, intestinal symptoms with, (100) **250**
  exophthalmic, kinetic theory of, (12) 239
  exophthalmic, pathologic physiology of, from surgeon's viewpoint, present-day conceptions, (76) **697**
  exophthalmic, roentgenoscopy of heart in, (120) 560
  exophthalmic, roentgenotherapy of, (68) 1666
  exophthalmic, roentgenotherapy of ovaries in, (113) **1931**
  exophthalmic, spontaneous recovery, (158) 562
  exophthalmic, sugar content in blood in, (103) 559
  exophthalmic, surgery of thyroid with special reference to, (17, 25) 1109, (17) 1191
  exophthalmic, surgical treatment, (46) 398, (116) 478, (73) **633**
  exophthalmic, thymectomy in, with myasthenia, (150) **561**
  exophthalmic, thymus with, (99) 869
  exophthalmic, thyrogenic origin of, (8) **1105**
  exophthalmic, thyroid in, histology of, (73) 1402
  exophthalmic, thyroid in relation to, (77) 697
  exophthalmic, typical and atypical, **1572**—ab
  exophthalmic, viscosity of blood in, (104) 559
  experimental production of, (93) **1500**
  intrathoracic, and thymus hyperplasia, Roentgen ray in, ***117**
  ligation of superior thyroid under local anesthesia, (107) 1189
  operations and local anesthesia, (166) 163
  operations, modern technic for, (36) 1583
  operative surgery of, (91) 406, (84, 85) 1494
  predisposition of women for, (214) **564**
  resection, technic for, (70) 703
  serodiagnosis, (138) 1674
  thymus and combination of thymus-hyperplasia with, (96) 1923
  treatment, Mark White's, **1319**
  uterus tumors associated with, **1572**—ab
  Weber county, (117) 478
GOLD in tuberculosis treatment, (97) 1672
  jewelry, skin discoloration from, **1094**
  preparations in tuberculosis, (100) 1403
  salts injected intravenously, action of, (114) 1037
GOLDSCHMIDT endoscope, **1247**
  method of urethroscopy, (200) 564
GOLF-BALLS, fluid core, literature on, **1656**
  injury to eye due to explosion of, (158) 243, ***1297, 1307**—E
GONOCOCCUS, (34) 475
  cultivation of, easy method, (156) 479
  do not proliferate in urethra itself, (40) **166**
  infection, diagnosis of, improved methods for, (126) **1844**
  infection, generalized, with keratosis, (126) 1038
  infection in male child without evidence of urethritis, (31) 475
GONOCOCCUS septicemia, fatal case, (109) 242
  streptococcus and other bacteria in infective deforming arthritis and arthritis deformans, serodiagnosis for, ***1208**
  vaccine, **1074, 1461**
  vaccines in gonorrheal ophthalmia, (48) 944
  vulvovaginitis, serodiagnosis of, (4) 1324
GONORRHEA, (112) 320
  acute, treatment, new, (35) **1395**
  and accessory passages in penis, (91) 1748
  arthritis due to, in arthritic subjects, (88) 477
  arthritis due to, meningococcus serotherapy of, (36) **1984**
  arthritis due to, vaccine in, (175) 1272
  chronic, persistence of, explained by polyps in urethra, (63) 1671
  complications, treatment, (123) 1196
  conjunctivitis due to, aborted by two per cent. solution of nitrate of silver, (91) 1494
  digestive bacterial extracts in, and other infections, ***1061**
  dispensary treatment, (68) 1742
  double chancre and, with confrontation, (95) 161
  encephalitis, infective, acute, probably originating from, **1391**—ab
  hyperkeratosis due to, (145) **330**
  in negro, (66) 1922
  infection of others during incubation stage of, danger of, (66) 1671
  iritis due to, what general practitioner should know about, **1486**—ab
  ophthalmia due to, gonococcus vaccines in, (48) 944
  ophthalmia due to, infection with, tardy, (164) 562
  phylacogen for, chronic, (91) 319
  prophylaxis, individual, (47) 1400
  rheumatism due to, management of, (64) 241
  salpingitis due to, cytologic examination of pus unreliable for diagnosis of, (90) 169
  serodiagnosis, (53) 398, (75) **697**, (69) **1666**
  treatment, (112) 636, (44) **1034**
  urethritis, acute, due to, in male, (42) 782
  urethritis, anterior, due to, (32) 1838
  urethritis due to, antimeningococcus serum in, (93) 89, (55) **247**
  urethritis due to, in infant boy, (18) 1668
  urethritis due to, old, flares up during influenza, vaccine therapy for, (147) 1674
  urethritis due to, treatment, (152) **1406**
  vaccine, autogenic, in diagnosis and treament in female, (81) **950**
  vaccine therapy, (91) 633
  vaginitis due to, vaccine in, (34) **1496**
  vulvovaginitis due to, in children, cause of persistence of, (8) 238
  wart on face, vaccine therapy of, (28) 1983
GOOD HOUSEKEEPING and clean advertising, **291**—E
  will, retiring partner may sell his influence and, **623**—Ml
GORGAS, Colonel, reward for, **222**
GOUT, acute, in larynx, localization of, (67) 1586
  and mild intestine toxemia, comparisons between, (8) 940, (49) 1028, (20) 1105
  calcium, and calcium mestastasis, (78) **633**
  diet in, **1720**
  latent, manifestations of, (147) 1329
  menstruation in gouty diathesis, (65) 1112
  nuclein metabolism in, (137) 560
GRAFTING: See also Transplantation
GRAFTING, amniotic membranes for, ***973**, (109) **1029**
  and traumatic dissemination of cancer in course of operations for malignant tumors, ***512**
  arteries, (54) 557
  blood-vessel, **1474**
  bone, (194) 873, (100) 1263
  bone and muscle, **1473**
  bone, without periosteum, **1900**—C
  fascia, (44) **166**, (131) 637, (75) 1840
  fascia, for ptosis of eyelid, (89) 793
  fascia, technic for, (110) 1842
  fascia, to correct spina bifida, (33) 1191
GRAFTING, nerve, (47) **324**
  nerve, improved technic for, (104) **170**
  ovary, (149) 1406
  skin flaps from chest to cover defects in fingers, (98) 704
  skin, operation for cancer of breast, developments in, ***416**
  skin, without dressings, ***1526**
  Thiersch, safety-razor to cut, **1245**—C
  Thiersch, thickening of, excessive, due to component of scarlet red, (23) **1980**
  thyroid into spleen or tibia in children with congenital myxedema, successful, (121) **1405**
  transplantation without periosteum successful, ***1533**
  urethra restored with segment of vein, (117) 1843
  vein, segment of, (65) 1333
  Wolfe, to correct total ectropion of upper eyelid, (85) 1580
GRAHAM flour, what is it? **1643**—E
GRANT method in surgery of epithelioma of lip, **1015**—C
GRANULOMA, coccidioidal, in California, **308**—C
  inguinale tropicum, (52) 1326, (99) 1328
  malignant, with recurring fever, Pel-Ebstein type, (184) 873
  pyogenicum infection due to protozoa, new, **290**—E
  ulcerating, venereal, tartar emetic in, (147) **1406**
GRAPE seed, appendicitis in relation to, (71) 1188
GRAPEFRUIT, effects of, **309**
GRAPE-NUTS, **1082**—E
GRASP, tonsil, new, and mouth gag with permanently attached tube for continuous etherization, (111) 1328
GRAVES' DISEASE: See Goiter, Exophthalmic
GRAVITY and syringe method, combined for intravenous injection of salvarsan, ***824**
GREAT Britain, proprietary evil in, **1557**—P
GREENWICK, malaria and mosquitoes in, **919**—ab
GROWTH, calcium for, importance of, (112) **1501**
  diet and exercise in relation to, (131) 1328
  disease influencing, (136) 1329
  of children, standards for, and state of nourishment, (169) 1753
GRUELS, utilization of, in infants, (109) 1196
GUAM, intestine parasites and diseases in, (155) 479
GUAYAQUIL, vessels from, fumigated, **1970**
GUIAC Test: See Test, Guiac
GUILLOTINE, tonsil snare and, new, ***650**
GUINEA-PIGS, tuberculous, intra-vitam staining of, with fat-soluble dyes, (46) 1106
GUMMA of urethra, (113) 400
GUTTA-PERCHA tissue, silver foil and gloves, introduction of, ***1119**
GYMNASIUM, (64) 477
GYMNASTICS, medical, as prelude to physical education in feebleminded children, (17) 1924
GYNECOLOGIST, physician as obstetrician and, (134) 699
  French Obstetricians, Pediatrists and, seventh annual meeting, **1373**
GYNECOLOGY, advances in, (1) 157, (53) 552
  and appendicitis, (164) **1198**
  bacteriologic examination in, (157) 1675
  chronic, disease, (153) 871
  conservatism in, (90) 629
  differential diagnosis in, difficulties in, (117) **870**
  field of, more than merely organs in lower abdomen, (92) 169
  massage in, (147) 638
  mental disease and, (136) 92, (141) 560, (154) **1031**
  minor, local anesthesia in, (98) 1835
  obstetrics and, 1887-1912, (26) 323
  operations, tuberculosis, acute, after, (187) **563**—ab
  psychiatry and, (112) 328, (134) 706, (99) 1037, (72) 1193
  ptosis in, (37) 239
  radium in, (61) 87, (93) 793
  roentgenotherapy in, (109) 90, (92) 249, (93) **406**, (175) 562, (93) 793, (107) 1269
  spinal anesthesia in, (97) 1835
  study of, progress in, during 1912, (39) 1110

GYNECOLOGY, tetany in, (76) **1747**
  thorax developed in prophylaxis of gynecologic disease, importance of, (61) 482

H

HABIT forming drugs, prevalence of use of, **1363**—E
HAIR apparently growing in bladder, (186) **873**
  -cast of stomach with gastrotomy, (23) 631
  -dyes, eye troubles due to, (25) **397**, (175) 1676
  dyes, paraphenylendiamin in, untoward effects of, **229**
  dystrophy of nails and, three cases in a family, ***27**
  over sacrum, abnormal tuft of, and plica neuropathica, (33) 244
  -splitting in hypertrichosis, **617**, **770**
  -stain, Potter's walnut juice, **229**—C
  whitening of beard and, on side of hemiplegia only, (93) **634**
HALLES, William, obituary sketch of, (1) 1918
HAMMER, percussion, graduated, (132) 706
HAND, cirsoid aneurysm of, (73) **1666**
  cleanliness of, among school children, **382**
  eczematoid affection of, recurrent, (70) 160
  infections, (30) 1324, (80) 1743
  infections, literature on, **1175**
  injurious, wet antiseptic dressings for, (100) 1667
  lesions following injuries of upper extremities, (1) 1393
  pus in, location of, (25) 1496
  sterilization, (178) 873
  sterilization, bolus alba in, (143) 1406, (51) 1585
  valve, suction, for clearing operative field, ***897**
  vein anesthesia for foot and, (48) **166**
  veins on, identification by, (109) 951
  Volkmann's ischemic contracture of, (27) **1984**
HARE-LIP and cleft palate, treatment, (64) 791
  extensive, operation for, (78) 404
HARVARD medical school and medical education, (11) 860
HARVEY and Sydenham, work of, ***884**
HASLAM traction bar, Gerster's disapproval of, **615**—C
HAT, stiff, and baldness, **1233**—E
HAUNTED houses and furnace gases, **1883**—E
HAWAII, report of board of health of, **915**
HAY-FEVER, (70) 1188
  etiology of, (36, 37) 1260
  vaccine therapy of, (32) 244, **1796**—E
HAYNES Copper Company, New York, information concerning, **1016**
HEAD, fetal, Porter's method of correcting faulty position of, (203) 874
  gunshot wound of, traumatic epilepsy after, (107) **1404**
  injuries, **236**—ab
  injuries of newborn infant, (2) 1393
  specialists in state eleemosynary institutions, importance of, (102) 785
  suppuration, focal, chronic, with general symptoms, (36) 398
  surgery, (67) 1262
  teratomas on back of, (53) 1266
HEADACHES, carbon monoxid may be cause of anemia and, **1883**—E
  eyes and, (98) 629
  in infectious diseases, severe, rachicentesis in, (53) **1034**
  indurative, (74) 944 (108) 1189
  influence of motor insufficiency of stomach in neurasthenia and, (98) 242
  nose operations for, (35) **2070**
  of thyroid origin, (138) 1338
  radical cure, unusual type of, ***1954**
HEADLIGHT, electric, cheap and efficient, (132) 242
HEALTH and lives of women and children of Kentucky, what federation of women's clubs will do to conserve, (90) 1029
  and police departments, cooperation between, need for more general, (13) 1492
  appropriation, how shall we spend it? (4) 1184
  athletics and, **446**—E
HEALTH, athletics and, in navy, **131**—E
  board, efficient, (12) 1919
  board of, law, constitutionality of, **235**—Ml
  boards not abolished, **1386**—Ml
  boards to meet in St. Paul, **1170**
  conditions and vital statistics an advertising asset, **910**—E
  conditions as they exist in South Georgia, (57) 1834
  conditions for country, better, how obtained, (124) 1328
  Conference of State and Provincial Boards of, of North America, meeting of, **1311**
  conservation of, (57) 477
  cost of, and war, **831**—ab
  cost one cent a day, **1082**—E
  county boards of, (58) 1834
  department, Bell system creates, **457**
  department, including Indian service in proposed, advantage of, **1558**—C
  departments, waste of inadequate support of, **1559**—ab
  expenditures of federal government, **904**—E
  figures of British army in India, remarkable, **298**
  figures of British navy, **531**
  housing and, (25) 695, **1886**—E
  laboratory, of state board of, work of, (74) 1982
  laws, enforcement of, (118) 85
  National Department: See also Owen Bill
  national department of, and National League for Medical Freedom, or organized medicine vs. organized quackery, (64) 553
  national department of, movement for, **1366**—E, **1382**—ME
  of Europeans in Uganda and East Africa influenced by climate and other factors, (35) 1669
  officer, amounts paid for proper services to, not recoverable for county, **1258**—Ml
  officers and the public, (77) 783
  officers, county, full-time, **1486**—ab
  officers, county, full-time, need of, (59) 1834
  officers, county, supervisory, **619**—ME
  officers, duties and compensation of, substitutes not allowed, **1567**—Ml
  officers, property destroyed by, towns not liable for, **157**—Ml
  officers, training of and instruction in hygiene in medical colleges, ***1199**
  organization in schools, **779**—ab
  protective surveys and programs, general need for, (10) 1184
  public, (68) **160**, (22) 151 (86) 1029
  public, and child, (66) 553
  public, and domestic animals, (77) 1982
  public, and housing problem, in relation to tuberculosis, (56) 480
  public, and tuberculosis, (57) 480, (27) 626, **1571**—ab
  public, and tuberculosis in South Africa, (25) 625
  public, education, ***427**
  public education among women, (65) 553
  public, in South, negro in relation to, (11) 1492
  public, is public wealth, (101) 785
  public, law, advisability of amending articles II and III of, (70) 553
  public, legislation and medical education, annual conference on, **391**
  public, legislation in 1913, **230**—ME
  public, legislation, needed, **1483**—ab
  public, legislation, proposed, **391**—ME
  public, legislation, summary of, **928**—ME
  public, legislature, different methods of drafting measures for, **838**—E
  public, matters, cooperation of laity and medical profession in, appeal for, (93) 945
  public, organizations, cooperation among, **1080**—E
  public, pamphlets **1253**—ME
  public, physician and, (56) 1834
  public, problem, constructive efforts toward its solution, (57) **627**, (89) 1029
  public, service in New York State, plan for reorganization of, (18) 1627
  public, Sulzer's special message on, **835**—E
  public, work, business side of, (1) 1264
HEALTH, public, work, concerted, by Young Men's Christian Association, possibilities of, (94) 1029
  public, work, cooperative, plans of, that will be presented for action by Kentucky Educational Association, (93) 1029
  public, work in cities, (63) 553
  public, work, practical, that will be attempted by Kentucky Press Association, (92) 1029
  public, work, what is opportunity of minister to assist in, and how to secure his active assistance, (95, 96) 1029
  resorts, diet regulation at, (81) **1841**
  service, President's commission favors, **771**—ME
  smoke, effects of, (61) 1493
  state board of, and public school sanitation, (87) 1743
  valid ordinance of board of, **79**—Ml
  visiting in American city, (103) 1923
  work expense, **606**
  work progress in America, (3) 1184
HEARING acuity enhanced by psychologic methods, (77) 1922
  bone conduction of sound with normal, (111) 635
  capacity, measurement of, (155) 1198
  hygiene of, for school children, (172) 1676
  injurious effects of loud noises on organ of, (44) 398
  loss of, in one ear from injury, (79) 1580
  preservation of, ***878**
  test apparatus for, (101) 1269
HEART action, arrested, revival of, (62) 1746
  action of blood and, in healthy children, (70) 2071
  action, slow, exceptional types of, (35) **557**
  acute infections and (46) 160
  and arterial decomposition, prevention and treatment, **1484**—ab
  and kidney cases exhibiting high blood pressure, management of, (131) 401
  anemic diastolic murmer at base of, (41) 1191
  anesthesia and heart strain, prevention of, ***1273**
  arhythmia, (68) 1834
  asthma, (9) 699
  athletics and over-exertion of, chronic, prognosis of, (132) **1844**
  athletics and, (115) 705
  asystole, Karell's milk cure in, (130) 407
  auricular and nodal (?) extrasystoles, (34) 556
  auricular fibrillation, (6) **164**, **665**—T
  auricular fibrillation, automatic movements of ventricles with (42) 1746
  balneotherapy in disease of, (85) 1841
  -beat, mechanism of, and functional disturbances, (81) 83
  -beat, mechanism of, in atrioventricular paroxysmal tachycardia, (81) 249
  -beat, temporary arrest of following incision of pericardium for suppurative pericarditis, (10) 1104
  -beat, weakness of, (49) 403
  -block, (102), 161, (12) 243, **365**—T, (134) 1328, (6) 1329
  -block after tropacocain spinal anesthesia, symptoms suggesting, (98) 1269
  -block, complete ventricular rate in, (11) 1108, (11) **1259**
  -block, functional, **1799**—E
  -block, ventricular beats in, premature, (33) **557**
  blood expelled from, amount at each beat, (108) 1749
  boning of thoracic precardial wall in certain affections of, **316**—ab
  broken compensation, treatment, **45**
  chorea of, (40) **789**
  cinematograph of, action, (102) 250, (124) 1749
  congenital disease, case of, ***1278**
  diagnosis, prognosis and treatment of disease of, (8) 1108
  diastolic pressure in aortic regurgitation, determination of, (10) **1979**
  diet of roasted wheat grains in disease of, (129) 1116
  digitalis, action on different forms of disease of, (140) 485
  dilatation and athletics, (207) 874
HEART disease, **45**—T, **124**—T, **203**—T, **281**—T, **265**—T, **444**—T, **518**—T, **594**—T, **665**—T, **748**—T, **902**—T, **996**—T, **1806**
  disease and arteriosclerosis, prevention of, in healthy individuals past middle life, ***803**
  disease and gastro-intestinal tract, (30) 1033
  disease and secondary polycythemia, (55) **1497**
  disease, chronic, resort treatment, **124**—T
  disease, literature on, (35) 1400
  disease, physical measures in treatment, general principles for, (87) 327
  disease, toxic disturbances, **828**—T
  displacement with lung tuberculosis, (72) **1267**
  disturbances of, to be bound in book form, **852**
  dorsal auscultation of blood-vessels and, (123) **636**
  dropsy, medicinal treatment, (124) 1196
  electrical action of human, (29) 1983, (10) 2068
  embryo, pulsations in, in second week, (1) **695**
  exercise, influence of digitalis on recuperation of, (106) **1930**
  exercise, influence of, (14) 239
  extrasytoles, (116) 1030
  extrasytoles, alternating rhythm after, (44) 1191
  extrasytoles, auricular and nodal, (34) 556
  failure, acute, (61) 241
  Flint's murmur, causes of, (54) 1497
  foreign body, toothpick, in, (42) **1833**
  functional test of, (13) 780
  functional test of, rise of blood-pressure in venous system during physical effort as, (83) 249
  gynecologic operations of pregnancy and labor in acute and chronic affections of, **1737**—ab
  healthy manifestations of, (10) **1108**
  healthy, some manifestations of, in children frequently taken as indications for treatment, (9) 243
  hypertrophy, (116) 1038
  hypertrophy, high pressure, (7) **1258**
  hypertrophy of left, incipient, roentgenoscopy of, (58) 1671
  hypertrophy, simple, **902**—T
  impulse initiation and conduction in, localization of, (23) **1260**
  in arteriosclerosis, (70) 1666
  in diphtheria, (57) 1580
  in tuberculosis, (201) 564
  injury from sudden physical effort, (158) 1118
  insufficiency, murmurs of, (81) 89
  kidney function in disease of, (18) **1259**
  malformation, congenital, (199) 874
  metastatic sarcoma in, (135) 1590
  mitral disease, absence of certain mitral murmurs in, (17) 1741
  mitral dwarfism, (9) **1836**
  mitral stenosis, auricle in, (12) 1108
  mitral stenosis, crescendo murmur of, (101) 328
  mitral stenosis, reduplication of sound in, in connection with third sound, (44) 324
  mitral valve rupture, spontaneous, in chronic myocarditis, (136) 252
  murmurs and patients, (77) 83
  muscle, (91) 161
  muscle, defective, and valvular symptoms, (30) 1106
  muscle, lipins of, in ox, (93) 1327
  nerve ganglia of, morbid histology of, (51) **1187**
  neuroses, (126) **485**
  neurosis of diaphragm and, (88) **634**
  neurosis, psychogenic, sexual, (77) 1671, (86) **1987**
  Osler's sign and skin phenomena sometimes associated with disease of, (21) 1924
  premature beats arising in auriculoventricular bundle of child, (3) **1738**
  pulmonary insufficiency, ***1150**
  pulse in disease of, influence of sequestration of venous blood on, (76) **1194**
  purging effect of, on blood-pressure and, ***436**
  regurgitation in young man, (129) 1674
  rhythm, anomalies in, (65) 1580
  roentgenography of disease of, (56) **698**, (68) 1671
  roentgenoscopy of, in exophthalmic goiter, (120) 560

HEART, secondary polycythemia in diseases of, prognostic significance of, (25) 1837
  sign in cancer, experience of, (2) **2067**
  size and heart function in children showing orthostatic albuminuria, orthodiagraphic study, (39) **1832**
  sound, musical, (211) 1754
  stab wound of, (68) 1402
  stenosis, (88) 1922
  stenosis, acoustic phenomena in, (10) **244**
  stenosis, recurrent paralysis with, (25) 2069
  subaortic stenosis, (2) 1189
  sugar in disease of, (27) **1583**
  surgery, (101) 483, (96) 704, (103) 869
  suture of, **2024**—ab
  syphilis and involvement of, symptoms and diagnosis, **1483**—ab
  technic for study of, improved, (119) 560
  tonic with action like that of digitalis of asclepiadaceae-milk-weed-family, new, (73) **949**
  treatment of diseases of, (95) 1334, (97) 1494
  tuberculosis bacillus in, (112) 251
  tumor in, (46) **790**
  valves, surgery of, experimental research on, (129) 870
  valves, topography of, revealed by roentgenoscopy, (7) **624**
  valvular disease, extracardiac causes of failure of compensation in, (11) 239
  valvular disease, prognosis in, (88) 1748
  wound of, penetrating, operation for, (6) 1494
HEAT and electricity, effects of, are identical, experiments indicate, **1707**—E
  and life, (159) 1502
  in gastro-intestinal disturbances in infants, (38) 1305
  intense, disorder due to, (96) 1108
  intense, effects of exposure to, on working organism, (16) 1258
  production and sugar content of blood, (41) 1984
  regulation and central nervous system, **520**—E
  regulation in infants, (117) 251
  regulation of body in hot climates, **1794**—E
  stimuli applied to skin, action on blood-supply of brain, (45) 2070
  summer and summer diarrhea, (10) 1836
  vasomotor reflexes elicited by cold and, from regions devoid of temperature sensibility, (36, 37) 1832
HEBRA'S herpetiform impetigo, pathogenesis of, (146) 1270
HEDERIN, chemical and pharmacologic properties of, a sapoglucosid contained in leaves of common ivy, (63) 1188
HEDIOSIT, **516**
HEDONAL anesthesia, (54) 87
  anesthesia in children, (3) 479
HEEL bone, exostosis of, **1727**
  bone, fracture of internal tubercle of, (38) 1926
  bone, fracture of posterior process of, (163) 1198
  bone, fracture of, recent, (33) **1583**
  new, with *pathognomonic sign for* detecting inflammatory lesions in anterior arch of foot, ***1152**
HEIGHT and weight at different ages of applicants at recruiting station, Cleveland, (158) 479
HEINTZ Food Company, **922**—P
HELIOTHERAPY: See Sunlight Treatment
HELMINTHS, appendicitis from, (74) **1499**
  from surgical standpoint, (120) **1589**
  gapes in man due to, (29) 556
  ileus from, (137) 1116
  in children, (3) 80
  in children, prevalence of, at Rio de Janeiro, (44) 557
  of anthropoid apes found also in man, (54) 1670
  reflex phenomena from, (103) **794**
  serodiagnosis of, (162) 1271
  spasm of intestines from, (72) **168**
  toxic nephritis from, in boy of five, (137) 252
HEMAGGLUTININS in human milk, transmission of, (60) 791
HEMANGIOMA cavernosum, pathology and treatment, (105) **1835**
HEMATEMESIS in liver syphilis, fatal, (28) 1109
HEMATOGENESIS, growth of chicken bone-marrow in vitro, its bearing on, in adult life, (50) **241**
HEMATOLOGY *in service of neurology*, (151) 870
  present status of, (71) 326
HEMATOMA and thrombi of vulva and vagina, (40) 1584
  in abdomen developing during labor, (111) 1588
  left orbit, modified Krönlein's operation for, (4) 945
HEMATOPORPHYRINURIC, congenital, and beard growth in women, (64) 1840
HEMATURIA, (161) 1502, (66) 1580
  essential, (67) **944**
  essential, unilateral kidney hemorrhage with reference to, (124) **321**
  following sterilization of skin with benzine five to ten days, (96) 1749
  renal, (79) 1107
  renal, *unilateral, etiology of*, ***10**
  unilateral, in chronic nephritis, (24) **552**
HEMIANOPSIA, altitudinal, unilateral and bilateral, (86) 1580
HEMIPLEGIA, cerebellar, syphilitic, (90) 558
  cerebellar, syphilitic, clinical forms and diagnosis, (60) **1332**
  diphtheritic, (16) 1495
  from scarlet fever in puerperium, (52) 324
  gradually developing, due to cerebral neoplasm, (54) 1107, (140) 1329
  traumatic, (122) 1589
  whitening of hair and beard on side of, only, (93) **634**
HEMISPASM and neuralgia, facial, treatment, (46) 631
HEMOGLOBIN metabolism in malaria, (4) **401**
HEMOGLOBINURIA, experimental, from ingestion of distilled water, (107) **328**
  from marching, (139) 1270
  in children originating in kidney occasionally, (31) 1926
  Malarial: See Blackwater Fever
  paroxysmal, (57) **247**
  paroxysmal, cholesterin in, (98) **1037**
HEMOGREGARINE, infective granule as initial phase in life-history of, (3) 243
HEMOLYSINS in feces extracts, (20) 1259
  phagocytes the source of, (47) 1034
HEMOLYSIS, immune serum lipase *and*, (51) **241**
  influence of lipoids on (61) **1326**
  inhibiting action of carbon dioxid on bacteriolysis and, (41) 866
  inhibition of, by serum of individuals with cancer, (48) **627**
  origin and action of, (36) **476**—ab
HEMOPHILIA, **473**—ab, (103) 1108
  blood-serum, human, for, ***44**
  developing in course of stomach cancer, (45) 324
  in women, (146) 1751
  Mendel's laws govern, (86) 1841
  thermocauterization in, (108) **1931**
HEMOPTYSIS after perforation of aorta aneurysms, (62) **1840**
  ergot and morphin in, intravenous injection, (118) 1843
  treatment, (20) 86
HEMORRHAGE, adrenals *in newborn* infant, (109) 251
  after tubal abortion, toxicity of, (90) 868
  anemia from, (86) 704
  antepartum and postpartum, (33) 1579
  bone, arrest by plugging with soft tissue, (15) **1105**
  cerebrum, diagnosis by rachicentesis, (47) **1741**
  cranium, in newborn infant, (84) **868**
  due to premature separation of placenta, vaginal cesarean section in, (86) 1834
  excessive, during menstruation, treatment, (93) 1672
  from erosion of gastroduodenal artery by duodenal ulcers, fatal, **151**—ab, (31) **1832**
  from various sinuses of dura mater, muscle flap to arrest, (109) 1842
  gastro-intestinal, treatment, (48) **1585**
  gastro-intestinal, unusual forms, (87) **1929**
  hemophilic, thermocauterization in, (108) **1931**
  horse-serum, local application controlling, ***721**
  in hydronephrosis, diagnosis, (9) **475**
HEMORRHAGE in pancreas, (133) 1501
  in stasis cyanosis, (99) 705
  infant, newborn, (134) 401, (9) 1391
  internal, on seventh day after contusion of spleen, (116) 1673
  into cystic cavity from carcinomatous degeneration of cystic tumor, death due to, (114) 1263
  intracranial, **1248**—ab
  intraperitoneal, during labor from rupture of uterus vein, (114) 1588
  intraventricular, in newborn infants, (27) 551
  kidney, unilateral, and essential hematuria, (124) **321**
  Lung: See Hemoptysis
  meninges, in newborn infant, operative treatment, (46) **866**
  movable kidney, (44) 701
  obstetric, blood transfusion after, (34) **245**
  operative, with narrow aorta system, extra danger from, (93) **704**
  perineum, spontaneous, (127) 407
  post partum, method of controlling, by manual compression of abdominal aorta, (145) 162
  post partum, treatment, **1388**—ab
  precipitated blood serums in treatment, (129) 242
  rectum, method of controlling, ***1619**
  stomach, and other complications in labor, (8) 693
  suffocation, (112) 559
  sugar solution in, intravenous infusion of, (101) **1841**
  tardy, with appendicitis, (94) 1500
  throat, fatal, (3) **864**
  tonsillectomy followed by serious, (161) **1271**
  typhoid, (131) 85
  typhoid, treatment of, **1733**—ab
  uterus, (143) **1751**
  uterus, after menopause, (68) **482**—ab
  uterus after menopause, and prophylaxis of cancer, (143) **637**
  uterus disease due to, roentgenotherapy or vaporization in, (147) 1751
  uterus, drug treatment, (3) 1831
  uterus, from non-pregnant uterus, surgical treatment, (4) 1831
  uterus, of newborn infants, (115) 1673
  uterus, pathologic, (7) 1577
  uterus, roentgenotherapy of, (2) **1831**
HEMORRHAGIC conditions in children, pathology, etiology and treatment, (17) 1664
  diathesis, epidemic, (135) **486**
  disease of infants and children, normal human blood serum in, (106) 399
  disease of newborn infant, (75) 399
  disease of newborn infant, horse-serum for, ***1154**
  disease of newborn infant, treatment, **74**—ab, (18) **317**
  disease of uterus, thyroid origin of, (104) 1930
  disease with purpura, (43) **1746**
  erosions in stomach in connection with melena neonatorum, (65) 325
HEMORRHOIDS, (127) 478
  clamp for, new, (89) 319
  extra-anal method of treating, (82) **1747**
  injection treatment for, **70**
  operations, (181) **563**, ***1154**, (129) 1328, **1559**—C
  treatment, (90) 697
  Whitehead operation for, 200 cases, (94) 783, (66) **1333**
HEMOSTASIS in resection of parenchymatous organs, (151) 1502
HEMOSTAT, tonsil, Corwin's, (113) 1328
HENOCK'S Purpura: See Purpura, Henock's
HEREDITY, age of parents as factor in, **616**
  alcohol and, (107) 785
  atheroma and, (89) 950
  cause of nutritional disturbances in infancy, (123) **1932**
  eugenics and falling birth-rate, (38) 1400
  eye in relation to, (88) 554
  insanity and, **146**—ab, (78) 399, (97) 1269
  law of Gregor Johann Mendel in reference to, (48) **82**
  pathologic, (85) 558
  unfit and, **127**—ab
HERMAPHRODITISM, (102) 399, (131) 1836
HERNIA, (113) 705
  appendix in incarcerated, (38) 2069
HERNIA, bile, (62) 1586
  bilocular, (79) 1396
  bladder, (95) **484**, (160) 1118, (68) 1927
  children, treatment, (82) **1029**
  complicated with undescended testicle, (56) 160
  diaphragm, (146) 330, (5) **624**, (19) **780**, (66) 949, (114) 1749
  diaphragm, congenital, (72) 1986
  diaphragm, probably traumatic, in adult consumptive, (44) 1584
  epigastric, importance in diagnosis of abdominal conditions, (14) 941
  epigastric, with stomach ulcer and cancer, frequency of, (34) 700
  extrasaccular, (14) 316
  fat, **236**—ab, (59) 477, (18) 625
  femoral and inguinal, operations for, (178) **1676**
  femoral, good way to treat, (26) **1186**
  gangrenous, combined anastomosis *and fistula operation for*, (26) 700
  in 279 cadavers, (68) **1333**
  incarcerated, cecum-small intestine volvulus in, (84) 1333
  inguinal, (63) 166
  inguinal, in children, treatment, (88) **864**
  inguinal, indirect, operation for cure of, new, ***2032**
  inguinal, medicolegal aspects of, (95) 1397
  inguinal, radical cure of, **315**—ab
  inguinal, radical operation for, improved technic for, (92) 327
  inguinal, strangulated, in young infants, (17) 625, (16) 1577
  internal, case of mesocolic hernia, (45) 160
  obturator, double, radical operative *cure, (90) 1396*
  operation, accidents of, (86) 1494
  ovaries and fallopian tubes, (98) 1500
  parasacral, muscle plastic operation on, (115) 483
  pectineal, (110) 951, (115) 1749
  properitoneal, (12) 1324
  Richter's, (46) 324
  roentgenoscopy of, (80) 1927
  sacs, cysts connected with, etiology of, (19) **1191**
  sliding, of large intestine, (94) 483
  strangulated, (75) 863
  strangulated, operative technic, (89) 864
  supravesical, external, (81) 1333
  suture of large, technic for, (148) 707
  through pelvic outlet, (122) 320
  treatment, (155) 708, (112) 1269, (19) 1495
  vaginal, operation for cure of, (6) **1394**
  ventral, lateral, (82) 1333
HERNIOTOMY and appendicectomy by inguinal canal, (96) **90**
  appendicectomy in, (45) 246
  ileus after, (126) 636
  inguinal, double, single transverse incision for use in, (98) **1667**
  under local anesthesia, (117) 162
HERPES, brow with bacteria found in gasserian ganglion, (68) 1840
  face and mouth, infections with colon communis bacilli in women in relation to, **1234**—E
  iris of conjunctiva, (12) 1664
  rhizotomy for, (58) **167**
  zoster and varicella, (70) 249
  zoster complicating bronchitis or pneumonia, (147) 1502
  zoster in puerperium, (150) 708
  zoster, ionic medication in, (39) **1265**
  zoster is the eruption in acute posterior ganglionitis, ***1691**
  zoster of brow in senile dement, diplococci in gasserian ganglion in, (161) 1198
  zoster, virus of, course taken to reach nerve ganglion, (47) 1187
HEWITT'S artificial airway, description of modification of, ***1858**
HEXAMETHYLENAMIN, compatibilities of, **465**
  formalin excretion in urine of children and infants taking, factors which influence, (33) **1260**
  in typhoid, (50) 1034
HEXOSES, action of leukocytes on some pentoses and, (80) 1028
HICCUPS, persistent, ***1879**
HIGH-FREQUENCY CURRENT, (96) 629, (121) 870, (79) 1402, **1707**—E
  for cancer of bladder, (130) 320
  for operating on bladder, (109) 1037
  high tension, (88) 1667
  in exophthalmic goiter and perverted thyroid secretion, (1) **694**

HIGH-FREQUENCY CURRENT in high blood-pressure, (3) 694
  in trigeminal neuralgia, (14) 243
  in vesical papillomata, value of, (19) 860
  Oudin, for benign papillomata of urinary bladder, introduction through catheterizing cystoscope, (76) 628
HIP, ankylosis of vertebrae, shoulder joints and, (87) **1987**
  arthritis of, traumatic, crippling, cheilotomy for, (5) **1743**, (6) 1836
  disease, extension apparatus for, (100) 84
  disease, short spica in, (63) 1742
  dislocation, congenital, etiology of, (29) **81**
  dislocation, congenital, open reduction by anterior incision, (10) 859
  dislocation, congenital, treatment, **2024**—ab
  dislocation, old-standing, open operation for, (18) *699*
  dislocation, ultimate outcome of, (44) **790**
  fixation in treatment of disease of, (4) 859
  -joint, arthrodesis of, (71) 1586
  -joint disease, short spica in, (63) 1742
  -joint, dislocation, congenital, deformity after reduction of, (62) 1927
  -joint, dislocation, congenital, treatment, (4) 1982
  -joint, excision of, in 34 cases of suppurating tuberculosis, results, (7) **864**
  -joint, osteoma in front of, (40) **947**
  tuberculosis, mechanical treatment of disease of, (2, 3) **859**
HIPPOCRATES, (11) 86
  oath of, proposed addition to, **927**—C
HIRSCHSPRUNG'S Disease: See Colon, Dilatation, Congenital
HISTAMIN, action of, on surviving arteries, (39) 861
HISTORY and case-record blanks or cards, request for, **689**
  registers, personal and family, (28) 1027
HODGEN splint for fractures, Brown's modification of, **1248**—ab
HODGKIN'S DISEASE: See Pseudoleukemia
HOLMAN, Miss., call for physician in mountains of North Carolina by, **1479**—C
HOMBURG, mineral mud at, (95) 950
HOME sanitation, (76) 1982
  Supply Company, **1243**—P
HOMEOPATHY, past and present, (81) 697
HOMOSEXUALITY, (117) 1263
  and alcohol, (129) 636
  psychogenesis and treatment, (66) 1107
HOOKWORM DISEASE: See Unci*nariasis*
HORMONAL, action of, (90) 1114
  research on, (121) **1116**
HORMONES, influence on opsonic index, (71) *249*
HORSE-CHESTNUT, action of, **540**
HOSPITAL accommodations for treatment of venereal diseases, (69) 1742
  administration, detrimental effect of present system of, on interests of medical profession, *(46) 1265*
  advice to patients after surgical operations on leaving, ***1133**
  Bangkok, **297**
  children's, medical school and public, (23) 860
  clinical record, ***1205**
  clinical record, when it is not evidence, **157**—Ml
  compulsory admission of patients into, **1807**
  construction, general principles of, (123) 400
  construction in United States navy, recent, (122) 400
  construction, literature on, **390**
  contagious diseases in infant wards, prophylaxis of, (61) **867**
  control, adequate, (119) 242
  country, surgery in, (12) 2066
  diets, Protestant and Catholic, **1088**
  diets, special, (100) 1269
  experience with typhoid during 46 years, (95) 1749
  field, and ambulance corps, evolution of, (89) 1189
  field, proposed method of pitching and striking a, rapidly, (59) 1493
  fresh air in schools and, prophylactic and therapeutic value of, including sunlight therapy, (42) **1982**
HOSPITAL, infant, under care of infants' welfare organizations and, method of scoring viability of, (21) 317
  infant wards in public, (62) **1498**
  infants' ward of, prophylaxis of infection, (69) **2071**
  infectious diseases treated at, (56) **782**
  insane, and community, (104) 1923
  insane, state, large, argument for, (16) 860
  international, rebuilding at Kobe, Japan, **297**
  Jubilee, of Vienna, **1168**
  management, (115) 162
  maternity, secret, municipal, **1806**
  medical education and, **775**—ab, ***974**
  medical education, clinical and postgraduate in relation to, **775**—ab
  morbidity statistics, (93) **1189**
  naval, for tuberculosis, Las Animas, Colo., (151) 479
  necropsy in large hospitals of United States and abroad, statistics of, ***1784**
  needs of eye, ear, nose and throat surgeon in general, (15, 48) 1395, (82) 1580
  of Paris, tour of inspection and study through, (57) 557
  operating-rooms for modern, which provide for spectators, ***1847**
  or fifth year in medical education, **854**, **932**—ab
  positions, **310**
  prophylaxis, (93) 1667
  railroad, associations, (75) **83**
  railroad, in Mexico, **297**
  service in Germany and United States, brief comparison between, with reference *to requirements for* medical practice, (87) 1189
  ship for *fisheries*, **296**, *(152) 479*
  ship for United States navy, plans and description of, (125) 401
  specialism in, (25) 1980
  system of intercommunication arranged among London medical schools and, **915**
  traveling, *for rural needs*, **755**—E
  tuberculosis, (3) 1918
  tuberculosis, *donation for*, **1472**
  urinalysis, (85) 1922
HOUSE, mosquito-proof and storm-proof, for tropics, new, (3) **1397**
HOUSEHOLD remedies for accidents, (122) 1404
HOUSING and health, **1886**—E
  and health departments, (25) 695
  bureau, municipal, in Berlin, establishment of, **609**
  conditions, improving, in cities, **133**—E
  problem and public health in relation to tuberculosis, *(56) 480*
  reform, constructive program for, (106) 1923
HUMERUS, fracture-dislocation of anatomic neck of, *circular resection* and suture of axillary artery for transverse laceration by, (143) 162
  fractures of lower end of, treatment, *(13)* **865**
  tearing off of radial articulation of, (102) 483
  when man had a hole in his, (56) 1326
HUMIDITY, device to increase, in house in winter, **1094**—C
HUNGER, stomach *in*, **448**—E
HUNTER and Lister, Hunterian oration on museum of Royal College of Surgeons of England and, (1) 945
  museum and Lister, (16) 946
HURBURGH Bill and Antikamnia Chemical Company, **1711**—E
HYALOID artery, persistent, ***173**
HYDANTOIN derivatives in metabolism, behavior of, (88) 1327
HYDATID Cyst: See Echinococcosis
HYDATID mole: See Deciduoma Mal*ignum*
HYDRENCEPHALOCELE, occipital, congenital, removal *of cerebellum* in, (65) **1193**
HYDROCELE, electric pocket light shows transparency of, as aid in diagnosis, (93) 950
  fluid, action of, and certain *other* pathologic liquids on objects used in biologic test for epinephrin, (36) 626
  in infants, operation for, (6) **945**
  of *tunica vaginalis*, bottle operation for, (160) 162
  treatment, new *method of*, **1895**
  unusual type, ***514**, ***1226**
HYDROCEPHALUS, congenital, subtemporal muscle drainage by silver wire drainage mats *in*, (7) **1105**
HYDROCEPHALUS, *internal*, chronic, (26) 865
  internal, congenital, (20) **1324**
  internal, in children, operative treatment, (78) **482**
HYDROGEN dioxid and hydrolysis, *(130) 1674*
  ionized, in human urine, *extremes* of variation of concentration of, (72) 1028
  peroxid, commercial preparations of, germicidal efficiency of, ***1603**
HYDROLYSIS and hydrogen dioxid, (130) 1674
HYDRONEPHROSIS, *diagnosis and indications of operation in early*, ***16**
  hemorrhage in, diagnosis, *(9)* **475**
  intermittent, ureter obstruction or beginning of, (21) 475
  not diagnosed for 17 years, (39) **701**
  of pregnancy, acute, (6) 1264
HYDROPHOBIA, (58) 241, **770**, ***990**, ***1069**, (95) 1588
  control of, (6) 1738
  etiology of, (128) **242**, (53) 1585
  false, (195) **563**
  influence of food on incubation of, (118) 1589
  is right eye blind in, **1320**
  negri bodies in, (49) 240, (40) 866
  paralytic type of, and poliomyelitis, **146**—C
  Pasteur treatment, **1732**—ab
  poliomyelitis, acute anterior, due to bite of dog infected with, (137) 1329
  Vienna, **533**
  virus of, two methods for obtaining, (42) **1106**
HYDROPYONEPHROSIS with calculi and rudimentary kidney in man of 31, (61) 1671
HYDRORRHEA, *amniotic*, etiology of, (112) 1842
HYDROTHERAPY: *See also Balneotherapy*; Baths
HYDROTHERAPY in America, neglect of, (15) 1980
  rationale of, (61) **1834**
HYDROTHORAX, *bilateral*, nephritis with ascites, general edema and, in secondary syphilis, (18) 1330
  myocardial, **1023**—ab
  tuberculous, (19) **2069**
HYDROXY-CODEIN, action of, (93) **319**
HYGIEA'S ten year index, **1471**
HYGIENE and clinical medicine for diseases of children, chair of, **917**
  city babies', (76) 1113
  course in school of medicine of Syracuse University, (26) 1492
  dining room and kitchen, healthy employees in, **1479**—C
  for normal children, (71) 628
  in schools and colleges, (180) 1272
  industrial, Gov. Sulzer on importance of, **452**—E
  infant, (176) 1272
  instruction in, in medical colleges and training of health officers, ***1199**
  match factories, (203) 564
  municipal, (66) 1262
  personal, education of public in, (109) 478
  public, advances in, and future of *physicians*, **152**—ab
  ships below decks, (108) 1397
  teaching by indirect methods, (29) 159
HYGROMA cysticum colli, **2025**—ab
HYOSCIN-MORPHIN anesthesia for alcohol injection in neuralgia, (26) 1330
  in labor, **1814**
HYPERACIDITY, (161) **487**
  feces with anacidity and, (64) **325**
  gastric-juice, *causation and treatment*, (2) 1923
HYPERCHLORHYDRIA and alkalies, (114) 478
  rhizotomy for, (58) **167**
HYPEREMIA, active, following local exposure to cold, (4) 1979
  local, benefit from, in acute affections, (94) 1672
  passive, in inflammation treatment, (72) **1928**
  stasis, in infected injuries of knee, (98) 559
  suction, in otology, (215) 1754
HYPERKERATOSIS, gonorrheal, (145) **330**
HYPERLEUKOCYTOSIS, specific and extreme, following injection of bacillus typhoid in immunized rabbits, ***1950**
HYPERNEPHROMA, extrarenal, (71) 1402
  horseshoe kidney, (4) 316
  kidney, (146) 162, (138) 1501
HYPERNEPHROMA, Recklinghausen's disease with, (130) 1270
  nodular, of liver associated with lesions in brain, (127) 1270
HYPERPYREXIA in rectum in children, (104) 1037
HYPERSECRETION after test meal in diagnosis of stomach ulcer, (61) **325**
HYPERSUSCEPTIBILITY: See An*aphylaxis*
HYPERTENSION: See *also* Blood-Pressure, High
HYPERTENSION and hypotension, mechanism and therapeutics of, *(74) 1666*
  and hypotension treated at Vittel, analysis of series of cases, (8) 1982
  arterial, in nephritis, pathogenesis of, (192) 563
  arterial, management of, **444**—T
  nephritic, clinical and experimental studies, (1) **1738**
  significance and *management of*, (44) 1579
H[illegible]**026**—ab
  [illegible]tion in, **226**—C
  postoperative, and aseptic wound fever, identity of cause and their prevention, (133) 1030, (27) 1831
  thyroid and, (114) **85**
HYPERTRICHOSIS, (76) 1262
  hair-splitting in, **617**, **770**
  treatment, (31) 1838
HYPNOTICS, analgesics and anti*pyretics*, **610**—ab
  checking use of veronal and other, **1008**
HYPOCHLORITE treatment of water supplies, **211**—E, **466**, (60) 1107
HYPOPHOSPHITE treatment, fallacy of, **747**—T
HYPOPHYSIS CEREBRI, approach to, through anterior cranial fossa, (12) **625**
  cancer of, (94) 1667
  changes with acromegaly, (60) 2071
  diabetes insipidus and, (130) **706**
  disorders of two lobes of, symptomatic differentiation between, (1) **1025**
  during pregnancy and after castration in women and animals, (73) 482
  effect of removal of, in dog, (21) **1324**
  functioning, mechanical influencing of, experimental, (202) 1751
  in metabolism of carbohydrates, (59) **696**
  isolation of active substance of, (84) 1268
  lesions of, and uncinate region, **1910**—ab
  perimetric deviations accompanying, early lesions, **1910**—ab
  physiology and pathology of, (35) *1187*
  simultaneous disease of thyroid, testicles and, (123) 1589
  surgery, experimental research on, (149) 92
  surgical intervention, (139) **1320**
  tuberculosis of, (176) 488
  tumors and adiposity, (126) **91**
  tumors and infantilism, (7) 1979
  tumors, classification of, (8) **1744**
  tumors, new formation of nerve cells in isolated part of nervous portion of, in acromegaly with diabetes, (2) **1663**
  tumors of base of brain immediately behind, **1023**—ab
  tumors, removal of, (81) **482**
HYPOPHYSIS EXTRACT: See Pituitary Extract
HYPOSPADIAS, operation for, (23) 865
  treatment, (25) 317
HYPOTENSION and hypertension, mechanism and therapeutics of, (74) 1666
  and hypertension treated at Vittel, analysis of series of cases, (8) 1982
HYRGOLUM, sublimate, oxycyanid and sublamin in salvarsan relapses, intravenous administrations of, (81) 864
HYSTERECTOMY, acromegaly developing after, at 38, (82) 1596
  for prolapse of uterus, (11) 1321
  needles found in intestine and appendix during, (12) **555**, (23) 1033
  selection of women for life insurance risks on whom ovariotomy and, have been performed, (82) 83
  technic for, (80) 558, (65) *914*
  year's work in, (5) 1258

HYSTERIA, anxiety, and anxiety neurosis, relation between, (31) 1920
  psychoanalysis, (36) 1665, (34) 1920
  traumatic, diagnosis, (123) 699
  traumatic, motor disturbances in, athetoid and dissociated, analysis of, (114) 1673
  views of Plato and Freud on etiology and treatment of, (15) 1577

I

I. M. S., history of, (10) 699
ICHTHYOL and phenol in external otitis, ***742**
ICTERUS: See Jaundice
IDAHO Medical News, **1467**
  state board April report, **1566**
IDENTIFICATION records for unknown dead, (20) 1831
IDIOSYNCRASY, experimental research on, (99) 1588
  in infants to cow's milk, (74) 2071
  to common foods, (89) 161
IDIOTS: See Backwardness; Degeneracy; Feebleminded
IDIOTS, Mongolian, (89) **1587**
  mortality in 4,000 feebleminded and, (61) 863
  sterilization of, (97) 84
ILEOCOLOSTOMY for arthritis, legality of, (11) **1032**
ILEOSIGMOIDOSTOMY for colon stasis, (22) **695**
ILEUM, cancer in jejunum and, (142) **1338**
  feces impacted in, for 53 days, recovery, ***722**
  gangrene of, complicating appendicitis, (36) 81
  kink, etiology of, **148**-ab
  kink, fetal peritoneal folds of Jonnesco, Treves and Reid in relation to pericecal membrane and, **148**—ab
  Lane's kink and Jackson's membrane, (96) 945
  lower, excision of eight feet of, (125) 85
  terminal, angulation of, acute, cause of intestine obstruction in acute appendicitis, (34) **1741**
  terminal, pathologic conditions of cecum and symptoms and diagnosis, (153) 1031
  tuberculous ulcer of cecum and, (33) 1106
ILEUS, cystic kidney causing, (62) 558
  due to Meckel's diverticulum, (13) 316
  from compression of intestine between gravid uterus and promontory, (44) 1839
  from displacement of normal uterus, (48) **1331**
  gall-stones, (118) 484, (131) **1589**
  helminths causing, (137) 1116
  postoperative, high intestine obstruction and acute pancreatitis, (93) 1581
  syndrome of, toxic action of glandular secretions as factor in, (61) 1193
  twofold, after herniotomy, (126) 636
ILIAC artery, tuberculous aneurysm of right common, ***1413**
  vein, external, thrombophlebitis of, ***1523**
ILLINOIS college, pioneer medical school, (52) 398
  medical news, **59, 135, 215, 292, 375, 454, 527, 675, 756, 840, 911, 1004, 1083, 1162, 1234, 1309, 1369, 1468, 1548, 1647, 1713, 1802, 1889, 1967**
  Pellagra Commission, nutrition investigation of, **833**—E
  state board January report, **1826**
  state board September report, **1017**
ILLNESS, compensations of, (58) 1666
  what is not an, consulting a physician or confinement to house, **544**—Ml
ILLUMINATOR oblique, improved, (66) 1396
  operating-room, improved apparatus for, ***1846**
IMBECILITY: See Idiocy
IMMIGRANTS, defectives, and moron, study of, ***105**
  feebleminded, detection of, ***106**
  feebleminded, diagnosis, (50) 696
  feebleminded, problem of, **209**—E
  feebleminded, tests for, **908**—E
  infectious diseases imported through, means for diminishing or preventing, (28) 159
  insane and feebleminded, arriving at port of New York, (83) 1667
  insane, problem of, (4) 1738
IMMIGRANTS, medical examination of arriving, (27) 159
  methods of examining, recommended improvements in, **210**—E
  midwife problem and, (18) 1980
  trachoma in modern, its dangers to America, (19) 1980
  tuberculous, in United States, problem for every nation, (17) 1980
IMMIGRATION laws, administration of (26) 159
IMMUNE bodies, formation of, in human serum by intravenous injection of diphtheria toxin, (117) 407
  serum lipase and hemolysis, (51) **241**
IMMUNITY, (49) 1580
  against anticoagulating action of peptone, research on, (32) 1330
  against tuberculosis, Spengler's rapid precipitation method for estimation of approximate, modification of, (34) 1400
  anaphylaxis and, (57) **1188**
  anaphylaxis in relation to disease and, (2) **624**
  biostatistics of Jewish race pertaining especially to susceptibility and, (97) 1667
  by mouth against cholera, experimental, (145) 1197
  experimental, and agglutination reaction in typhoid, ***1764**
  general principles of, (137) 408
  inefficient, and new growth, (16) 699
  nutrition and, **1651**
  onset and duration of, consequent on inoculation of plague nucleoprotein, (25) 1744
  passive, cytology of blood in, (8) 243
  pregnancy, (21) 1033
  therapeutic, development of, (62) 87, (5) 163
  through tuberculosis infection, (93) 478
  tuberculin and, (13) 401
  typhoid, experimental, (163) 1675
  works on, **1016**
IMMUNO-THERAPY in ophthalmology and [illegible] (92) 1494
  [illegible] 21) 636
  [illegible] Care of Mothers and Infants, **845**
IMPETIGO, herpetiform, Hebra's pathogenesis of, (146) 1270
IMPOTENCY and involuntary seminal emissions, (64) 1023
  sexual, in male, (5) 316, (12) 475
  sexual, treatment, (37) 2069
IMPULSE initiation and conduction in heart, localization of, (23) **1260**
INCINERATOR, kitchen, its construction and use, (55) 944
INCISION, lengthwise, for resection of ankle, (93) 483
  surgery-Z, plastic, (93) 783
  transverse, single, for use in double inguinal herniotomies, (98) **166**
  vagina, pelvis examination in doubtful cases through, (48) 1741
INCLUSION bodies in scarlet fever, (2) **479**—E, (82) 1402
  cells, (30) 165
  leukocytic of Dohle, (77) 404, (58) **1188**
INCUNABULA, international catalogue of, proposed, **1958**—E
INDEX, Hygica's ten year, **1471**
  Journal of American Medical Association an encyclopedia of medical information with key in, **1887**—E
  of general nervous conditions, **1800**—E
  of The Journal of the American Medical Association, **2051**—E
INDIA, health figures of British army in, remarkable, **298**
INDIAN Affairs, House Committee on, refused request for fund for adequate health work among Indians, **2049**—E
  Amercan, contagious diseases, **1814**—ab
  American, health of **832**—E
  medical service, **1244**—C, (60) 1493
  medical service, including it in proposed department of health, advantage of, **1558**—C
  medical service, needed reorganization of, **1812**—C
  obstetrics, early-day, among, experiences in, (137) 699
  service, physicians in, **454**—E, **458**
INDIANA medical news, **59, 215, 455, 527, 757, 840, 1004, 1035, 1309, 1468, 1647, 1714, 1967**
  state board January report, **1905**
  state board of health, year's work of (35) 552
  State Medical Association, activities of, (36) 552
  State Medical Association Journal in active campaign against fee splitting, **1645**—E
INDICAN and urorosein in urine, clinical significance of tryptophan in feces and, (81) 2072
INDICANURIA and phosphates, (117) 698
INDICTMENT, validity of medical practice act and, **939**—Ml
INDIGESTION: See Dyspepsia
INDIGOCARMIN as functional kidney test in chromo-ureteroscopies, results of 200, ***185**
INDOL, determining small amounts of, technic for, (158) 1271
  influence of diet on formation of, in rabbits, (29) 946
INDUSTRIAL accidents and secrecy of profession, **1719**
  accidents, medical exploitation of, **221**
  aneurysm in file-grinders, (87) 1499
  brass poisoning, brass founder's ague, (9) 1738
  conditions and fatigue, (6) 624
  diseases, (108) 1923
  diseases in Italy, **1168**—ab
  diseases, inadequacy of compensation for, **1463**—E
  diseases of skin, exclusive of so-called trade eczemas, (153) 243
  diseases, prevention of, (59) 782
  eczemas, external origin, (65) **319**
  hygiene and human indifference, **1799**—E
  hygiene, Governor Sulzer on importance of **452**—E
  hygiene, new review on, **606**
  injuries to eyes, prevention of, (139) 478
  neuroses, nature and treatment, (106) 1029
  strain, effects on working women, (1) **396, 428**—ab
  training for cripples in Russia, (92) 161
  traumatism, rupture of veins as, (124) 407
INEBRIETY: See also Alcoholism
INEBRIETY and physiologic effect of alcohol, (32) 86
  home and office treatment, (133) 85
  periodicity of, (3) 1258
  problem of, (29) **239**
INFANTILISM, calcium excretion through feces in, excessive, causes of, (48) **241**
  cause of, failure to develop in, (40) 626
  hypophysis tumor and, (7) 1979
  intestine absorption in, (39) 626
  nitrogenous compounds in feces in, nature and origin of, (47) 240
INFANTS, abdomen pain in, (23) **1583**
  abnormal physical and sexual development of, probably due to tumor of pineal gland, (25) 1260
  abnormally large at birth, (175) 872
  abnormally large, dystocia from, successful induction of premature delivery, (66) **1112**
  air swallowing in, cause, (121) 407
  albumin, starch and fat-splitting ferment in excretion of, (97) 406
  albuminuria in newborn, (73) 2071
  alimentary saccharose test for, (36) 1191
  anatomic differences between adults and, **391**
  anemia in newborn, iron in, (68) **1112**
  appendicitis in, with appendix in inguinal hernial sac, (37) 81
  arthritis, purulent, in, (133) **1590**
  asphyxia of newborn, mucus extractor in, (3) 322
  asphyxia of newborn, oxygen under pressure in, (100) **1195**
  asphyxia of newborn, pulmotor for artificial respiration on, (11) 694, **1735**—ab
  asphyxia of newborn, sphygmomanometer for determining persisting pulse in, (55) **1401**
  aspiration of milk in nursing, (210) **874**
  bacillary dysentery in, **1389**—ab
  beriberi in, (16) 244
  blind, operation bestowing vision on (69) 1266
  blood, coagulation time of, (2) 238
  bottle-fed, retention of nitrogen and salt in, (47) 247
  breast-fed and bottle-fed, mortality of, statistical comparison, (3) **1103**
  breast-fed, constitutional inferiority of organs in certain, (123) **1932**
  breast-fed, malnutrition in, (69) 1262
  breast-fed, management of, (24) 1260
  breast-fed, methods of encouraging, and contra-indications to breast-feeding, (16) 396
INFANTS, breast-fed, pathology of, (127) 1750
  breast-milk feeding, urine test for, (75) 1986
  breast-nursing, nose obstruction and orthodontia, **301**—ab
  breast-nursing, promotion of, (137) 92
  cachectic, nitrogenous bodies in blood of, (51) 247
  cancer of liver in male, (73) 1333
  cancer of skin in, primary, multiple, (45) 1187
  carbon monoxid poisoning cause of anemia in, (67) **1112**
  casein curds in feces in, pathogenesis of, (3) 2066
  cerebrocerebellar diplegia in, (1) **2066**
  consultation stations, value of, **1169**—ab
  convulsions in, diet for, (1) **1103**
  convulsions in, etiology of, (41) 81
  crying, diagnostic importance of manner of, (58) 557, (30) 1191
  death of, doubtful cause of, **1016**
  development of newborn, (142) 92
  diabetes in children and, (42) **1326**
  diarrhea in bottle-fed, (163) 163
  diarrhea in, feeding problem, (138) 243
  diarrhea in, whey for, (117) **1404**
  diarrhea, summer, in, (74) 1986
  diet in infections in, (66) **2071**
  digestive ferments in, (155) 562
  digestive troubles of, obstinate, small doses of ipecac for, **1239**
  diphtheria bacilli in secretions of nose and throat in, with nutritional disturbances, (111) **1269**
  duodenal catheter, findings in, (95) **1114**
  eczema in, **591**—T
  electrocardiograms of weakly, (172) 1753
  feces, semeiotic significance of pathologic findings in, (83) 1834
  empyema, operation and recovery, (28) 323
  enteritis in, diet for, (121) 400
  erysipelas, vaccines for, (88) 1189
  fat, adequate intake of, importance of, (105) 406
  feeding, **200**—ab, (71) 944, (103) 1930
  feeding and examination of feces, (16) **1664**
  feeding, artificial, (105) 698
  feeding, artificial, scientific basis for, (6) 1576
  feeding, artificial, with special reference to feces examination, (32) 1106
  feeding, caloric, **539**
  feeding, developments in, recent, (63) 1396
  feeding, difficult, clinical and prophylactic suggestions for, (62) 1396
  feeding, disturbances in, recent interpretations of, (10) 1394
  feeding, graphic chart for calculating milk percentages and caloric values, (44) 81
  feeding, graphic chart method of studying and teaching principles of, (2) 80
  feeding, high percentage of fat used in, common results of, (96) 1494
  feeding, in diarrhea, (138) 243
  feeding, later, (64) 696
  feeding, problems of, illustrated by cases and charts, (42) 81
  feeding, proprietary foods in, uses and abuses of, (14) 1668
  feeding, sugar in, (175) **1753**
  feeding, vegetable diet in, (156) 486
  feeding, vegetable digesting ferment in, (118) 251
  feeding, whey in, (107) 1673
  formalin excretion in urine of children and, taking hexamethylenamin, factors which influence, (33) **1260**
  from birth to end of first year, 100 followed, (2) 940
  furunculosis, autovaccine therapy of, (156) **872**
  gall passages, stenosis of, in newborn, (95) 406
  gangrene of leg, amputation, recovery, (25) 1191
  gastro-enterostomy on thirteenth day, (34) 1191
  gastro-intestinal disturbances in, classification of, (122) 1931
  gastro-intestinal disturbances in, heat factor in, (38) 1395
  gastro-intestinal tract in newborn, alpha and omega of, (10) 1324
  gonorrheal urethritis in boy, (15) 1663

HIGH-FREQUENCY CURRENT in high blood-pressure, (3) 694
in trigeminal neuralgia, (14) 243
in vesical papillomata, value of, (19) 860
Oudin, for benign papillomata of urinary bladder, introduction through catheterizing cystoscope, (76) 628
HIP, ankylosis of vertebrae, shoulder joints and, (87) **1987**
arthritis of, traumatic, crippling, cheilotomy for, (5) **1743**, (6) 1836
disease, extension apparatus for, (100) 84
disease, short spica in, (63) 1742
dislocation, congenital, etiology of, (29) **81**
dislocation, congenital, open reduction by anterior incision, (10) 859
dislocation, congenital, treatment, **2024**—ab
dislocation, old-standing, open operation for, (18) 699
dislocation, ultimate outcome of, (44) **790**
fixation in treatment of disease of, (4) 859
-joint, arthrodesis of, (71) 1586
-joint disease, short spica in, (63) 1742
-joint, dislocation, congenital, deformity after reduction of, (62) 1927
-joint, dislocation, congenital, treatment, (4) 1982
-joint, excision of, in 34 cases of suppurating tuberculosis, results, (7) **864**
-joint, osteoma in front of, (40) **947**
tuberculosis, mechanical treatment of disease of, (2, 3) **859**
HIPPOCRATES, (11) 86
oath of, proposed addition to, **927**—C
HIRSCHSPRUNG'S Disease: See Colon, Dilatation, Congenital
HISTAMIN, action of, on surviving arteries, (39) 861
HISTORY and case-record blanks or cards, request for, **689**
registers, personal and family, (28) 1027
HODGEN splint for fractures, Brown's modification of, **1248**—ab
ODGKIN'S DISEASE: [illegible]
lipoxemia [illegible] cord in, subdural, diffuse, (29) 1665
malnutrition, **750**—E
malnutrition, feeding in, clinical studies, (26) 551
marasmatic, cod-liver oil in feeding, topical use of, (82) 319
meninges hemorrhage in newborn, operative treatment, (46) **866**
meningitis, (67) 1028
meningitis, due to influenza bacillus, fatal, (185) 1676
meningitis due to typhoid bacillus in. (54) **1188**
metabolism, importance of laws of physics and chemstry in study of, (72) 2071
metabolism of fat, calcium and nitrogen in, (70) 1986
metabolism of matter and energy in. (86) 950
method of scoring viability of, under care of hospitals and infants' welfare organizations, (21) 317
mortality and eugenics, (60) 1028
mortality and maternal ignorance, **1866**—ab
mortality and still-births, (41) 631
mortality, causes and prevention, (97) 161
mortality, great fall in, **916**
mortality, high, what it means, **1850**—ab
mortality in Germany during summer months, (95) 250
mortality in 1911, (104) 1335
mortality, milk stations or, (19) 1664
mortality, National Association for Prevention of, **1805**
mortality, postnatal causes (16) 158
mortality, prevention of, **1165**
mortality, prevention of, literature of, **388**
mortality, reduction of, in New York, (5) 550
mortality, teaching midwives in relation to prevention of, (14) 158
muscular exercise done by, (102) **1930**
nutrition, effects of heated and superheated milk on, (4) **940**
nutrition, influence of psychic factors on, (99) **1930**
nutritive disorders, pathology of, and enzymes, **600**—E
pancreatic ferments in, in acute intestinal indigestion, (5) 1103
HOSPITAL, infant, under care of infants' welfare organizations and, method of scoring viability of, (21) 317
infant wards in public, (62) **1498**
infants' ward of, prophylaxis of infection, (69) **2071**
infectious diseases treated at, (56) **782**
insane, and community, (104) 1923
insane, state, large, argument for, (16) 860
international, rebuilding at Kobe, Japan, **297**
Jubilee, of Vienna, **1168**
management, (115) 162
maternity, secret, municipal, **1806**
medical education and, **775**—ab, ***974**
medical education, clinical and postgraduate in relation to, **775**—ab
morbidity statistics, (93) **1189**
naval, for tuberculosis, Las Animas, Colo., (151) 479
necropsy in large hospitals of United States and abroad, statistics of, ***1784**
needs of eye, ear, nose and throat surgeon in general, (15, 48) 1395, (82) 1580
of Paris, tour of inspection and study through, (57) 557
operating-rooms for modern, which provide for spectators, ***1847**
or fifth year in medical education, **854**, **932**—ab
positions, **310**
prophylaxis, (93) 1667
railroad, associations, (75) **83**
railroad, in Mexico, **297**
service in Germany and United States, brief comparison between, with reference to requirements for medical practice, (87) 1189
ship for fisheries, **296**, (152) 479
ship for United States navy, plans and description of, (125) 401
specialism in, (25) 1980
system of intercommunication arranged among London medical schools and, **915**
traveling, for rural needs, **755**—E
tuberculosis, (3) 1918
tuberculosis [illegible] in newborn, **1022**—ab, (5) 1831
transmission of germs in vagina to, during labor, (181) 873
tuberculides, papulonecrotic, in, (2) **2066**
tuberculosis, diagnosis, (125) 699
tuberculosis, glandular or secondary form of, pathogenesis of, (60) 398
tuberculosis, lung, roentgenoscopy of, (52) 247
tuberculosis, pathology of, (17) 1593
tuberculosis, prognosis of, (120) 636
tuberculosis, roentgenoscopy of, (34) 1926
tuberculous attendant infects, ***1617**
ulcer of duodenum in, (105) **1500**
urobilin and urobiligen in urine in, (80) 406
vomiting, sweetened condensed milk arrests, 20 cases, (59) 1266
vomiting, treatment, (65) **248**, (110) **559**
vomiting, uncontrollable, sugar in, (60) **1498**, (35) **1926**
wards, contagious diseases in, prophylaxis of, (61) **867**, (69) **2071**
wards in public hospitals, (62) **1498**
weight curve of in relation to food, (29) 1185
welfare, conferences on, **679**, **1240**
welfare, municipal health work pertaining to, (25) 1105
welfare work and physician, (48) 1746
INFECTION and sarcoma of thyroid, coexisting, (23) **1325**
constitutional, and mouth infection, (25) 781
effective range of, **383**—ab
ether in, **1010**
from torn gloves, danger of, (75) 1402
hand, (30) 1324
hand, literature on, **1175**
heart during acute, (46) 160
hematogenous, of kidney, acute, **1389**—ab
in infants, diet in, (66) **2071**
in infant's wards of hospital, prophylaxis of, (69) **2071**
influence of certain, on rabbit testicle, (87) 1672
latent and recurrent, and subinfection, (81) 161
lymphocytosis connected with, (105) 1749
mucous channels and blood-stream as alternative routes of, (9) **1329**
HYDROCEPHALUS, internal, chronic, (26) 865
internal, congenital, (20) **1324**
internal, in children, operative treatment, (78) **482**
HYDROGEN dioxid and hydrolysis, (130) 1674
ionized, in human urine, extremes of variation of concentration of, (72) 1028
peroxid, commercial preparations of, germicidal efficiency of, ***1603**
HYDROLYSIS and hydrogen dioxid, (130) 1674
HYDRONEPHROSIS, diagnosis and indications of operation in early, ***16**
hemorrhage in, diagnosis, (9) **475**
intermittent, ureter obstruction or beginning of, (21) 475
not diagnosed for 17 years, (39) **701**
of pregnancy, acute, (6) 1264
HYDROPHOBIA, (58) 241, **770**, ***990**, ***1069**, (95) 1588
control of, (6) 1738
etiology of, (128) **242**, (53) 1585
false, (195) **563**
influence of food on incubation of, (118) 1589
is right eye blind in, **1320**
negri bodies in, (49) 240, (40) 866
paralytic type of, and poliomyelitis, **146**—C
Pasteur treatment, **1732**—ab
poliomyelitis, acute anterior, due to bite of dog infected with, (137) 1329
Vienna, **533**
virus of, two methods for obtaining, (42) **1106**
HYDROPYONEPHROSIS with calculi and rudimentary kidney in man of 31, (61) 1671
HYDRORRHEA, amniotic, etiology of, (112) 1842
HYDROTHERAPY: See also Balneotherapy; Baths
HYDROTHERAPY in America, neglect of, (15) 1980
rationale of, (61) **1834**
HYDRO[illegible] constitutional, [illegible] retardation in connection with education and crime, (37) 552
constitutional, of organs in certain breast-fed infants, (123) **1932**
INFLAMMATION, hyperemia, passive, in treatment of, (72) **1928**
INFLUENZA, (60) 944
bacillus, bacillus from spontaneous abscesses in rabbits and its relation to, (30) **476**
bacillus, meningitis in infant from, fatal, (185) 1676
differential diagnosis and treatment, (86) 319
flaring up of old urethritis during, autovaccine therapy, (64) 558, (147) 1674
gastro-intestinal, (52) 552
in 855 A. D., (82) 1267
meningitis due to, (14) 1831
meningitis due to, complicated by pneumonia, recovery, **1915**—ab, (73) 1922
with repeated rigors, (39) **1400**
INHALATION, antiseptic, continuous, in lung tuberculosis, (36) 480
improved technic for, (119) **91**
new apparatus for, (87) **697**
INHALER, ether given by drop method with closed, (96) 1835
somnoform, new, (6) 1668
INHERITANCE in 442 tuberculous families among workingmen, (63) **248**
of "acquired properties," (58) 404
INJECTION, intramuscular, of mercury in syphilis of nervous system, (79) 1667
intravenous, of saturated solution of camphor in pneumonia, benefit from, (122) 1501
intravenous, of various substances in animal cancer, ***1857**, **2022**—ab
neosalvarsan, technic for, (59) **1193**
quinin, subcutaneous, technic for, (60) 1193
salt, intravenous, (49) **2070**
salt, subcutaneous, simple and rapid method for administering, (3) **786**
salt, technic for, (150) 1117
salvarsan, technic for, (81) 1267, (138) 1329
subconjunctival, in eye disease, (145) 1030
INJURY case, selection of physician and services recoverable for, **313**—Ml
toes and insurance against accidents, (118) 1196
treatment by mobilization and massage, recent, (19) 699
HYPERNEPHROMA, Recklinghausen's disease with, (130) 1270
nodular, of liver associated with lesions in brain, (127) 1270
HYPERPYREXIA in rectum in children, (104) 1037
HYPERSECRETION after test meal in diagnosis of stomach ulcer, (61) **325**
HYPERSUSCEPTIBILITY: See Anaphylaxis
HYPERTENSION: See also Blood-Pressure, High
HYPERTENSION and hypotension, mechanism and therapeutics of, (74) 1666
and hypotension treated at Vittel, analysis of series of cases, (8) 1982
arterial, in nephritis, pathogenesis of, (192) 563
arterial, management of, **444**—T
nephritic, clinical and experimental studies, (1) **1738**
significance and management of, (44) 1579
HYPERTHYROIDISM, **2026**—ab
and goiter, (141) 1030
limitations of suggestion in, **226**—C
postoperative, and aseptic wound fever, identity of cause and their prevention, (133) 1030, (27) 1831
thyroid and, (114) **85**
HYPERTRICHOSIS, (76) 1262
hair-splitting in, **617**, **770**
treatment, (31) 1838
HYPNOTICS, analgesics and antipyretics, **610**—ab
checking use of veronal and other, **1008**
HYPOCHLORITE treatment of water supplies, **211**—E, **466**, (60) 1107
HYPOPHOSPHITE treatment, fallacy of, **747**—T
HYPOPHYSIS CEREBRI, approach to, through anterior cranial fossa, (12) **625**
cancer of, (94) 1667
[illegible] rational care of, (76) 1667
sterilization of, (97) 84, (62) 1834
INSANITY: See also Psychiatry
INSANITY, alcoholic, (85) 319, **380**
among Indians, (15) 551
and complicated eye disease, pedigree showing both, (1) **1581**
and pellagra, (52) **1742**
common form of, (34) 1395
court restricts to attending physicians' opinions on, **545**—Ml
curability of, (6) 1663
diagnosis, (89) 242
etiology and prognosis of, (106) 785
heredity and, **146**—ab, (78) 399, (97) 1269
manic-depressive, and literary genius, (77) 628
medical certificates in regard to, (82) **327**, (44) 1111
of feebleminded, (52) 82
post-traumatic, (99) 478
problem, some phases of, (63) 1982
sociologic aspect of, and allied defects, **357**—ab
syphilis and, **851**
teaching of, ***1057**
treatment, (106) 170
treatment of epilepsy and, (69) 88
INSECT aids in destruction of noxious species, advisability of utilization of, (42) 1838
and spread of infectious diseases, (115) 1263
carriers, (5) 479
carriers of bacterial infections, (18) 401, (34) 402, (5, 17) 470
disease-bearing, reduction and destruction of, (1) 85
poliomyelitis and, **55**—E
INSOMNIA and noise, (43) 398
INSPECTION, Medical, of Schools: See Schools, Medical Inspection of
INSTITUTE, medical, new, opening, **64**
of Infantile Hygiene and Public Charities, **299**
INSTITUTIONS, individualized diets in, **1720**
skin diseases and cleanliness in, **1656**
INSTRUCTOR, full-time, work of, in medical education, **387**—C
INSTRUMENT: See also Apparatus
INSTRUMENT, appendix excisor, (16) 1980
artificial airway for surgical anesthesia, ***185**[illegible]
blood-vessels, [illegible] in, (76) 633
bone-clamp and [illegible] **699**
bone-saws, circu[illegible] **81**
cannula for bloo[illegible]

INSTRUMENT, cannula-forceps for blood-vessel anastomosis, (41) 552
capsule forceps, (86) 945
dissector for submucous resections of septum, (134) 243
duodenum sound, (126) 407
electric perimeter, practical, (75) 1396
energometer and sphygmobolometer, (107) 1749
esthesiometer, new (34) 861
fecal drainage, (15) **317**
for teaching auscultatory blood-pressure technic, new, ***279**
forceps, long thumb, for abdominal work, (161) 162
gastro-esophagoscope, (86) 83
hemostatic lid clamp, U-shaped, (85) 945
iris scissors, new, ***1226**
knife for prostate, (91) 793
ligature-passing forceps, automatic, ***1226**
light-carrier with lens and rheostat for urethroscopy, ***182**
lumbar-puncture needle, new, ***1204**
monochord, (119) 1328
mouth gag with permanently attached tube for continuous etherization and new tonsil grasp, (111) 1328
needle-holder for submucous resection of nose septum, ***1295**
nose and throat, (40) 943
percussion hammer, graduated, (132) 706
pile clamp for hemorrhoids, new, (89) 319
safety razor blade as scalpel, **67**—C, **1245**—C
Sahli's pocket sphygmobolometer, ***1211**
scleral trephine, new, ***2045**
sclerocorneal trephine, ***1537**
sheep-shears useful in surgery, modified, ***1784**
surgical, discarded, worthy use for, **227**—C
syringe, one-hand, (133) 330
tariff, **1322**—ME, **1726**—C
tariff changes on drugs and, proposed, **1382**—ME
tonsil clamps, new, ***2044**
tonsil dissector, (136) 162
tonsil guillotine and snare, ***650**
tonsil hemostat, Corwin's, (113) 1328
tonsil-snare, new, ***2043**
tonsil tenacular, (111) 161
tonsillectome, new, ***827**, ***1620**
tourniquet for intravenous work, new, (126) 162
umbilical cord clamp, (137) 321
urethroscope, operating, (122) 242
urethrotome, new, (38) **782**
visceral depressor for closing laparotomy wounds, ***897**
vulsellum cervix forceps, double, ***1952**
INSUFFLATION, Intratracheal: See also Anesthesia, Intratracheal Insufflation
INSUFFLATION, intratracheal, principles and uses, (39) 1395
systematic, of air as first aid in asphyxia, technic for, (130) 1405
INSURANCE act, **62**, **139**, **297**, **607**, **1719**, **1894**
act and British Medical Association, **760**
act and nostrums, large decrease in sales, **1238**
act, British Medical Association releases physicians from pledge, **458**
act, contract practice in England under, (63) 1028
act, crisis in profession, **219**
act, defeat of British Medical Association's policy, **379**
act in operation, **531**
act, removal of grievance of too much clerical work, **760**
act, results of, **1472**
act, working of, **916**
against accidents and injuries of toes, (118) 1196
company asking support of physicians, **1656**
doctors, payment of, **1238**
for disability in 1911, **1168**
life, and albuminuria, (3-5) 85
life, and middle-ear suppuration, (18) 81
life, and tuberculosis, (58) 480
life, conference on, **606**
life, examinations, (42) 1395
life, examiners meet, **843**
life, selection of women on whom hysterectomy and ovariectomy have been performed for risks in, (82) 83
INSURANCE, life, sphygmomanometer in examinations for, additional report, (76) 83
medical, and future of physicians, **153**—ab, (124) 242
national, of wage earners in Russia, (94) 950
physicians, fees of, **1971**
sickness, national, in Germany, **141**
[illegible] in Germany, (69) **167**
[illegible] (105) 242
[illegible] experiments with various strains of sporothrix, (36) 1106
INTERCOLLEGIATE gathering of students in South America, **297**
INTERNATIONAL conference on [illegible] liens, **1009**
[illegible] **1970**
[illegible] Education, [illegible]
Congress on Medical Climatology and Hydrology and on Geology, **1552**
Congress on Ophthalmology, **606**
Congress on Physiotherapy, sixth, **1553**, **1650**, **1720**
Congress on School Hygiene, **1237**
Dental Congress, **1650**
Exposition of Safety and Sanitation, **1893**
Institute of Chemistry proposed by Ostwald and opposed by chemical houses, **1229**—E
Medical Congress, **1175**, **1372**, **1649**, **1718**, **1804**, **1893**, **1903**, **1970**
Purity Congress meeting, **1006**
INTERNS, hospital, methods of appointing, ***639**
work required for graduation, **1888**—E
INTERNSHIP, should it be required for graduation? **934**—ab, (74) 1922
INTERSYSTOLE in man, (39) 1191
INTESTINE absorption in infantilism, (39) 626
adenoma in, simulating stenosis of pylorus, (51) **1401**
adenomyomatosis of small, subserous, (168) 872
alcohol by, absorption, (49) **1741**
anastomosis between kidney and, (85) **168**
anastomosis of, lateral, modification of Ferguson-Grant method, (104) 1262
atresia of, congenital, (189) 873
atresia of esophagus and, congenital, pathogenesis of, (63) 702
calculus, (6) 1743
cancer, diagnosis, early, (82) 1494
cancer of lower, palliative operations for, (56) 1192
compressed between gravid uterus and spine, (189) 563
deprived of its mesentery, invagination for, (148) 92
devascularization of, experimental, with and without mechanical obstruction, (24) **1325**
development of mucous membrane of large, and vermiform process in human embryo, (5) **474**
diseases of children, (129) 478
diseases, treatment during last fifty years, (108) **559**
distention, effects on shape of villi and glands, (6) 474
disturbance from sexual organs, (40) 557
diverticulitis, (50) 1833
doubling of great, (13) **164**
foreign bodies in, (66) 1402
foreign body in, feces with, (132) **408**
gangrene of appendix and small, operation, recovery, (4) 555
gangrene of, from non-penetrating bullet wound, (62) 477
gunshot wounds of, (100) 1029
gunshot wounds of, multiple, without perforation of lumen, (34) 81
helminths causing obstruction of, literature on, **310**
helminths causing spasm of, (72) **168**
ileus from compression of, between gravid uterus and promontory, (44) 1839
immunity of, from digestion by alimentary enzymes, **670**—E
in fulminating cerebrospinal meningitis, (124) 1931
infant, permeability of walls of, (106) **1673**
intoxication, (120) 85, (71) **633**, (4) **1190**, (18) 1191, (68) 1262, (22) 1837, (18, 30) 1983
intoxication and gout, comparisons between, (8) 940, (49) 1028, (20) 1105
INTESTINE intoxication and thyroid, (20) **1983**
intoxication, bacteriologic evidence in support of, (10) 1582, (37) 1669
intoxication, consequences and treatment from surgical viewpoint, (7) 1190
intoxication proceeding from, especially polyneuritis, ***101**
intoxication, prophylaxis of, (37) **246**
intoxication, skin indications of, (8) 1582
intoxication, symptoms and treatment, (6) **1190**
intoxication, therapeutics of, (91) 1835
invagination, retrograde, of, (39) 947
lesions due to contusions of abdomen, (139) 162
lesions of, with tuberculosis of ovary or fallopian tube, (68) **1267**
linguatula serrata found in human, in Brazil, (198) 873
lower, direct examination of, for diagnosis and treatment of diarrhea, (101) **320**
malposition of stomach and large, roentgenoscopy showing, (73) 1189
melanosis of mucosa of large, (205) 874
metabolism of children with complete absence of bile from, (5) **1576**
microbian flora of large, in cattle and sheep, (52) 1670, (27) 1926
motility of, influence of various contrast substances on, (23) **1664**
motor functioning of, and stools, relations between, (64) 325
needles found in appendix and, during hysterectomy, (12) **555**
obstruction, (65) 83, ***733**, (101) 1029, (116) **1263**, (7) 1324, (24) 1496, (65) 1580, (92) 1922
obstruction, acute, due to volvulus of cecum, (25) **556**
obstruction, acute, early recognition of, (119) 478
obstruction at two points, (98) 483
obstruction by gall-bladder calculus, (11)
obstruction, chronic, colonic dilatation, congenital and acquired, as factor in, (118) 320
obstruction, clinical study of 180 cases, **71**—ab
obstruction, diagnosis, difficulty and importance of early, (40) 324
obstruction, experimental work on, (24) 475
obstruction following cesarean section, acute, (32) 787
obstruction, high, postoperative ileus and acute pancreatitis, (93) 1581
obstruction in acute appendicitis, acute angulation of terminal ileum cause of, (34) **1741**
obstruction in rabbit, (38) **626**
obstruction, toxic substance produced by mucosa of closed duodenal loops, (25, 26) **942**
occlusion of, arteriomesenteric, (90) **1334**
occlusion of, by retrodisplaced normal uterus, (48) **1331**
oxygen applied direct in disease of, (162) **487**
parasites and diseases found in Guam, (155) 479
parasites in Costa Rica, (16) 1191
parasites in tropical pathology, is importance of, exaggerated? **1823**—ab
perforative lesions of, early diagnosis and treatment, (48) 1493
peristalsis in large, (103) 328
permeability of wall of, for bacteria and protecting action of omentum, (155) 1502
phlegmon in small, (64) 1402
physiologic rest of large, completed in ulcerative and obstructive lesions, **73**—ab
poisons, destructive influence on central nervous system of rabbits and guinea-pigs of long-continued minute doses of, (30) 1926
putrefaction in, influence of bile on, (49) 1497
removal of over eleven feet of small, successful, (125) **321**
resection of large, technic for, (211) 564
resection of small, **523**—E
resection of stomach and, improved technic for, (76) 1987
roentgenoscopy of large, with tumors in kidney region, (101) 920
INTESTINE, sarcoma of small, primary, (135) 1337
sliding hernia of large, (94) 483
stasis, (39) 324, (25) 700
stasis, chronic, (27) **245**, (63, 65) 477, (16) 865, (9) 1582, (23) 1837
stasis, chronic, versus septic infection, (11) **1032**
stasis, special reference to Lane's short circuiting operation, (67) 160
stenosis, flushing of large, in, (88) 793
stenosis in groove after reduction of incarcerated loop of, (89) 483
stenosis in newborn infant with rectum plug of mucus and epithelium, (82) 406
stenosis of small, (92) 1841
strangulation of, acute, (73) 1840
surgery of, conservation in some conditions of, (27) **781**
surgery of, large, disputed problems associated with, (1) 624
suturing stump of stomach or, improved technic for, (139) 92
torsion of large, operative treatment, (64) 632
transplantation, artificial vagina by, (104) 242, (19) 625
tuberculosis of stomach and, (45) 480
tuberculous perforation of, multiple, (51) 1034
tumor of large, malignant, (4) 629
typhoid perforation of, (131) **408**
ulcerations and perforations of cecum and small, from postoperative intestine toxi-infection, (54) 867
ulcerations, widespread, limited to, fatal case, (11) **1399**
volvulus, cecum-small, in incarcerated hernia, (84) 1333
INTUBATION tubes for larynx stenosis, specially devised, (136) 1030
INTUSSUSCEPTION, (1) 1836
diagnosis and treatment, progress in, (45) 1326
Henoch's purpura with, laparotomy, recovery, (12) **1330**
in child 11 months old, (132) 478
irreducible, in infant, resection of one-third of colon for, (33) 1832
INVALIDISM, (122) 1030
IODID medication, influence on phagocytosis of tuberculosis bacilli in sputum, (91) **1114**
IODIN, action of, new methods for using, (75) **88**
action on vascular system, (100) **170**
and benzin-iodin, methods of skin sterilization in emergency work, (42) **1028**
and phosphorus contents, size and physiologic activity of fetus thyroid, (46) **1665**
applied to external and internal genitalia in women, **151**—ab, (7) **695**
as antiseptic in tropical countries, (7) 2067
-containing complex in thyreoglobulin, nature of, (75) **1028**
content of thyroid, **1000**—E
content of thyroid, seasonal variation in, (65) **319**
cult of, and dread of skin, (21) 401
for fresh wounds, (102) **1835**
for mucosa in gastro-intestinal operations, (138) 1197
for small-pox, (17) 165
in body, action and fate of, (133) 1844
in ophthalmology, advantages of, (55) **1746**
in thyroid cancer, effects of, (19) 1259
in typhoid, (56) **557**
infected wounds at time of injury treated with use of serums and, (63) 783
nascent, for lupus of nose, (7) 1494
nascent, in cystitis, (67) 558
sterilization as now used at United States naval hospital, Norfolk, Va., (107) 1397
sterilization of skin, (142) 1197
IODIPIN, deposits of, interfering with roentgenoscopy findings, (91) 327
IODOFORM and hot air in ear and nose conditions, ***1946**
IONIZATION, experiments with, (24) 1664
in herpes zoster, (39) **1265**
in superficial epitheliomas, (124) 699
IOSALINE, **849**—P
IOWA medical news, **59**, **136**, **912**, **1163**, **1235**, **1468**, **1648**, **1714**, **1967**
state board March report, **1385**
state board September report, **772**

KIDNEY, polycystic, nephrectomy for, (16) 1324, (73) 1499
  pyelography in diagnosis of surgical diseases of, value of, (66) 1982
  resection, influence of operation on function of organ, ***13**
  roentgenoscopy of, technic for, (73) 558
  rudimentary, hydropyonephrosis with calculi and, in man of 31, (61) 1671
  rupture, subcutaneous, (106) 320
  supplementary ureters as cause of various affections of, (130) 1501
  Suprarenal Capsule: See Adrenal
  Surgery: See also Nephrectomy; Nephrotomy
  surgery, (3) 316
  surgical diseases of, diagnosis, (53) 1262
  surgical, unilateral, with pressure on common duct causing jaundice, (134) 478
  transplantation of, (129) 1932
  tuberculosis, (164) 1502
  tuberculosis, bilateral, nephrectomy with, (138) **408**
  tuberculosis, chronic, (135) 85
  tuberculosis, cystoscopy in diagnosis of, value of, (77) 864
  tuberculosis, diagnosis, (44) 318, (44) **1400**
  tuberculosis, diagnosis and treatment, (75) 1671
  tuberculosis in children, (42) 1034
  tuberculosis, indications and results of medical treatment, (38) **1034**
  tuberculosis, microscopic miliary tubercles at ureter mouth early sign of, (59) 1671
  tuberculosis, pseudo-healing of, (37) **166**
  tumors, (26) 787
  tumors in region of, roentgenoscopy of large intestine with, (101) 950
  tumors, malignant, clinical data on, ***274**
  tumors of adrenal, testicle and, embryogenetic relationships of, (26) 1325, **236**—ab
  tumors of ureter and, (10) **475**
  tumors, symptomatology of, 74 cases from Massachusetts General Hospitol, (20) 860
  urinary lithiasis, bilateral, ***114**
  urine retention in, operative treatment, (43) 1034
KINETIC theory of exophthalmic goiter, (12) 239
KITCHEN, healthy employees in dining-room and, **1479**—C
  incinerator, its construction and use, (55) 944
KLAUSNER reaction, nature of, **1078**—E
KNEE, amputation below, instead of exarticulation, (135) 637
  deformity below, operative correction of, (93) 1748
  derangement, (112) 1196
  dislocation, (97) 1500
  injuries, infected, stasis hyperemia in, (98) 559
  injury of crucial ligaments of, (107) **635**
  -joint, floating cartilage in, (31) 2067
  -joint, fractures involving, including epiphyseal separation, diagnosis and treatment, **2023**—ab
  -joint, infected, drainage without subsequent ankylosis, (131) 242
  -joint, injuries to semilunar cartilages of, (14) 1495
  -joint, oil injections into, by open incision method, **1917**—ab
  -joint, osteotomy of lower end of femur in permanent flexion of, **1917**—ab
  removal of semilunar cartilages in, ultimate outcome, (53) 166
  resection of entire, leaving only nerves and vessels, (59) **1927**
  sarcoma, (90) 249
  stiff, bicycle devised for, (110) 635
  subluxation of, anterior, congenital, (9) **859**
  tabes dorsalis causing affection of, resection for, (206) 1754
  tuberculosis in children, treatment, (113) 483
KNIFE, circular, for prostate, (91) 793
KNOWN doctors come to grief at Ottumwa, Ia., **1900**—P
KOJO and Salkowski urine test for diagnosis of cancer, (80) 1499
KORANYI, death of, **1972**
KORSAKOFF'S psychosis, polyneuritic delirium, (9) 1663
KOSINE, **66**—P
KRONLEIN, operation of, simplification of, (84) 1580
KUHN aspiration mask, (66) **632**
  aspiration mask, simple substitute for, **768**—C
KUR and cure, **1308**—E
KURASHIGI-SCHNITTER method for demonstrating tuberculosis bacilli, ***995**

L

LABELS, fanciful, of secret products, **453**—E
  on food, Supreme Court decision on, **1307**—E
  poison, needed amendment, **1547**—E
LABOR: See also Obstetrics
LABOR, analysis of 700 cases, ***2033**
  artificial, technics for, (104) 1269
  behavior of uterus in and after third stage of, (146) 1406
  blood loss of, safe limit, (132) **1932**
  blood-vessels, closure after, (173) 562
  brow presentations, (155) 1752
  care of perineum during and after, (30) 1260
  cocain injection into perineal tissue as head emerges, (92) 950
  conduct of, without vaginal examination, (41) 1326
  contracted pelvis and, (39) 2070
  crossed-hands maneuver to aid, (134) **1337**
  delivery of placenta and membranes, (78) 1107
  difficult, due to fetal ascites, (26) 1837
  dorsal decubitus after birth of head, necessity for, (123) 1038
  double uterus, bladder, vagina and vulva with successive full-time pregnancy in each uterus, (11) **946**
  fatalities during and immediately following, (133) 699
  fetal serum to cause onset of, (75) **1107**
  fetus overgrowth in, significance of, (76) 1107
  gynecologic operations in acute and chronic affections of heart during, **1737**—ab
  hematoma in abdomen developing during, (111) 1588
  in elephantiasis, (57) 1839
  injuries of pelvic floor due to, (13) **158**
  intraperitoneal hemorrhage during, rupture of uterus vein, (114) 1588
  management of women after, (64) **1112**
  morphin and hyoscin (scopolamin) in, **1814**
  normal, conduct of, (46) 552, (86) 629
  occipito-posterior position, (53) 1326
  ovary cyst in relation to, (128) 320, (123) **321**
  pituitary extract retards, (139) 1197
  pituitrin in, (90) 945
  position after delivery, (64) 1112
  premature, induction of, successful, in dystocia from excessively large infants, (66) **1112**
  rapid dilatation and accouchement forcé, (13) 1831
  symphysis separation during, (76) 1189
  station of presenting part in, (18) **941**
  stomach hemorrhage and other complications in, (8) 699
  third stage of, treatment, (84) 1113
  transmission of germs in vagina to infant during, (181) 873
  tuberculosis in relation to, (13) 1324
  tuberculous peritonitis developing after, (70) 1113
LABOR camp, insanitary, **1464**—E, **1901**—C
LABORADINE Pharmacal Company, **1161**—E
LABORATORY of state board of health, work of, (74) 1982
LABYRINTH, diseases of, (105) 320
  electrodiagnosis in diseases of, (10) 479
  origin of compensatory tonus after destruction of, (12) 81
  practical applications of studies of, (93) 698
LABYRINTHITIS and cerebellum abscess, differential diagnosis, (89) 84
  pathology of, (15) 81
  suppurative and serous, differential diagnosis, (33) 1740
LACRIMAL apparatus, intranasal operations on, technic for, (81) 399
  ducts, disease of, (157) 486
  sac, access to, through nose, (29) **2069**
LACRIMAL sac, extirpation of, (65) 1396
  sac, extirpation of, in chronic dacryocystitis, (26) 861
LACRIMATION, (88) 1580
LACTASE of mammary gland, (50) 318
LACTATION, care of breast during pregnancy and, (102) 1029
  improved technic for, (154) 562
  physiology of, (173) 1753
  stomatitis need not be expected during, **616**
LACTUCARIUM, Aubergier's, **358**—P
LAKE MICHIGAN, sanitary survey of, along Wisconsin shore, (59) 83
LAKES, great, sewage pollution of, (66) 863
LAMBERT treatment for drug addiction, **309**, ***1933**
LAMINARIA dilatation, peritonitis after, fatal, (93) 1841
LAMINECTOMY for fracture of vertebra, with necropsy, (149) 638
  paraplegia in Hodgkin's disease treated by roentgenotherapy and, (141) 1329
LAMPSTAND attachment, useful, ***900**
LANE bone plates in 76 operations, (23) **551**
  Harry, selected senator from Oregon, **212**—E
  kink and Jackson's membrane, (96) 945
  kink and Jackson's membrane, literature on, **1319**
  kink, fetal peritoneal folds of Jonnesco, Treves and Reid in relation to Jackson's membrane and, (77) **1396**
  kink, Jackson's membrane and cecum mobile, etiology of, (78) **1396**
  Plate: See also Fractures, Operative Treatment
  plate method of treating ununited fracture, (84) 1262
  plates, safety screw driver and screws for, (79) 83
  short circuiting operation, intestine stasis with reference to, (67) 160
LANOLIN and olive oil, injection of, for removal of wrinkles, atropy of optic nerve following, (83) 553
LAPAROSCOPY findings in 59 cases, (68) **249**
LAPAROTOMY, anesthetic for, selection of, (12) **396**
  blood-pressure and prognosis in, **1737**—ab
  cancer of cervix uterus, (52) 782
  early, in abdomen diseases, (65) 1922
  emphysema after, subcutaneous, (108) 1404
  exploratory, desirability of, (51) 1833
  exploratory, for abdomen cancer, **1574**—ab
  gauze sponges, in, **226**—C
  gynecologic, bacteriologic control of asepsis in, (72) 1747
  how does it cure tuberculous peritonitis? (17) **695**
  in home, (144) 485
  loofa sponges in, (137) 637
  on children, (66) **1928**
  postoperative complications of, (79) 319
  postoperative treatment, with complete wound closure, (84) 83
  preliminary and postoperative treatment, (36) 1579
  transverse incision in, (30) 866
  wounds, visceral depressor for closing, ***897**
LARNYGECTOMY, complete, under cocain anesthesia, (109) 1667
  for cancer of larynx, (80) 399
LARVICIDE, crude phenol as, experiments in British Guiana, (31) 165
LARYNGITIS, acute, (127) 952
  chronic, and angioma of larynx, (2) 550
  nerve blocking for painful, (37) **700**
LARYNGOLOGY and rhinology in general practice, (104) 399
  influence of work of Sir Felix Semon on, (14) 1109, (23) 1399
LARYNGOSCOPY, indirect, epiglottic suture in, value of, (4) 1743
  suspension, (130) 242, (9) 555, (41) 862
  tracheobronchoscopy and esophagoscopy, direct, (26) 401, (13) 786
LARYNGOTOMY, intercricothyroid, technic and advantages of, (129) 560
LARYNX, angioma of, in relation to chronic laryngitis, (2) 550
  cancer, laryngectomy for, (80) 399
LARYNX diphtheria, (58) **477**, (9) 1577
  disturbance in swallowing from disease of, relief of, (141) **486**
  examination, direct, (76) 1922
  gout, acute, in, localization of, (67) 1586
  innocent growths of, (103) 1328
  operations on, through mouth, (70) 1927
  speech without, ***1601**
  stenosis, chronic, specially devised intubation tubes for, (136) 1030
  stenosis following diphtheria, treatment, (45) 1833
  stenosis, large doses of antitoxin given early means of preventing, (45) **862**
  stenosis of diphtheric origin, continuous intubation with, (176) 1753
  stenosis of trachea and, chronic, treatment, (46) 1833
  tuberculoma of, (17) 1399
  tuberculosis, (105) **400**, (47) 480, (59) 482, ***1518**
  tuberculosis, treatment, (84) 161
LAVAGE, transduodenal, ***586**
LAW and medicine, **906**—E
  and sale of opium, morphin, etc., **298**
  on insane in France, proposed revision of, **1719**
  prohibiting fraudulent advertising, **1482**—ME
LAWSON, John, Daisy headache powders and, **1466**—E
LAXOL not approved, **1174**
LAZARUS and Dives, **1712**—E
LEAD carbonate salve, gangrene, superficial, after application of, (41) 1497
  colic, bradycardia of, (78) **867**
  poisoning, acute, (68) 1586
  poisoning and spinal cord disease, (72) **949**
  poisoning, chronic, with multiple aneurysm, case of, (16) 1668
  poisoning from drinking-water, chronic, (48) 1107
  poisoning, household, **1239**
  poisoning in storage battery works, prophylaxis of, (98) 1841
  poisoning in workers on brass, (116) **1269**
  poisoning, Wassermann reaction in, (10) 1668
  white, toxicity of, **603**—E
LECITHIN, cholesterin and cholesterin esters in blood-serum, (76) 703
  in narcosis, rôle of, (41) **627**
  influence of cholesterin and, on growth of tumors, (28) **942**
LE FORT'S operation for uterus prolapse, (13) 479
LEG, amputation, technic for, (157) 1502
  blocking of nerves in, effectual and harmless, technic for, (64) **703**
  circumcision, for varicose ulcer, (40) **1838**
  gangrene, in infant 11 days old, amputation, recovery, (25) 1191
  paralyses, anatomic explanation of many cases of weak or painful backs and, (17) 475, (1) 859
  paralysis of muscles of, total, deformity from gravity, (58) 1746
  polyneuritis of, following tubal abortion and local ischemia in legs, (54) **1266**
  sign, new, (72) **326**
  spring extension of, (146) 485
  ulcer, chronic, (100) 629
  ulcer, chronic, básic fuchsin in, ***1680**
  ulcer, office treatment, (197) **488**
  zoster of face and, comparison of, ***1692**
LEGISLATION, lunacy, jury law for commitment of insane in Illinois and later developments in, (15) 551
  medical, conference on, **690**—ab, **777**—ab
  national, on health needed, **1483**—ab
  public health, proposed, **391**—ME
  public health, summary of, **928**—ME
  Tennessee's needs in, (92) 945
LEGISLATIVE news, **467**—ME, **541**—ME, **617**—ME, **852**—ME, **929**—ME, **1018**—ME
LEGISLATURE, public health, different methods of drafting measures for, **838**—E
LEISHMAN Anemia: See Anemia, Leishman
LEISHMAN, blackwater fever showing cell inclusions of, (15) 244, (24) 787

IOWA State University, future of college of medicine, (74) 1834
  State University, medical department, *since 1876*, (73) 1834
  State University, medical education at, (71) 1834
IPECAC, small doses in obstinate digestive troubles of infants, **1239**, (67) **1499**
IPECACUANHA, in amebic dysentery, (14) 164
IRELAND, population of, **1894**
IRIS, eversion of pigment layer of, (39) 1028
  scissors, new, ***1226**
IRITIS, etiology of, (46) 862
  gonorrheal, what general practitioner should know about, **1486**—ab
IRON, albumin-containing preparations of, absorption of, (107) 406
  in anemia of newborn infants, (68) **1112**
  in blood, (32) **556**
  salicylate of, (45) 1111
IRRITABILITY of fingers immersed in liquid electrode, estimating sensory threshold by measuring, **1800**—E
ISATOPHAN, **516**
ISLANDS OF LANGERHAN, importance of, (128) 1270
ISOAGGLUTINATION in man and lower animals, (35) **1106**
ITALIAN physico-chemical academy, pursuit of empty honors, **770**, **1480**
ITCH, copra, (18) 244
IVY, common, hederin a sapoglucosid contained in leaves of, chemical and pharmacologic properties of, (63) 1188

J

JACCOUD, Sigismond, death of, **1650**
JACKSON'S MEMBRANE, (49) 1833
  and Lane's kink, (96) 945
  and Lane's kink, literature on, **1319**
  fetal peritoneal folds of Jonnesco, Treves and Reid in relation to Lane's kink and, (77) **1396**
  Lane's kink and cecum *mobile*, etiology of, (78) **1396**
  or membranous pericolitis, (61) 1107
JAPAN, cholelithiasis in, (51) [illegible]
[illegible]H-HERXHEIMER [illegible] megalo-
[illegible] (21) 479
  blastia [illegible]
  splenomyelogenous, persistent priapism in, (36) 318
  [illegible]lenomyelogenous, tuberculosis as [illegible]actor in, (52) 631
  [illegible]nomyelogenous, with unusually [illegible]gh leukocyte count, (26) 1492
  [illegible]rium X in rheumatism, anemia and, (82) 1113
  traumatic, (82) **2072**
  treatment, **473**—ab
  unusual case, ***822**
LEUKOCYTES, action of quinin on, (97) **320**
  count chart, differential, new, ***1516**
  count in osteomyelitis and tuberculosis of bones in children, diagnostic significance of, (19) **1492**
  count in pelvic suppurative conditions, prognostic value of, (86) **1397**
  count, splenomyelogenous leukemia with unusually high, (36) 1492
  effects of subdural injections of, on development and course of experimental tuberculous meningitis, (45) **241**
  in healthy children and at different ages, (77) 482
  in nephritis and acute infectious diseases, destruction of, (39) **1838**
  influence on anaphylatoxin, (89) 1929
  influence on viscosity of blood, (62) 791
  metamorphosis of, (75) **944**
  polymorph neutrophil, qualitative and quantitative effect on, with tuberculin in tuberculosis, (8) **555**
  producing organ, thymus as, (64) 167
LEUKOCYTOLYSINS and antileukocytolysins, origin of, (35) 789
  induced by Roentgen exposures of spleen, curative action of, (45) 1985
LEUKODERMA in mulatto, excessive, **1246**
LEUKOPLASIA of kidney pelvis, (40) 1034
LEUKORRHEA, causes and treatment, (112) 869
LIABILITY for malpractice, sufficient allegation to show, **1490**—Ml
  for negligence in making diagnoses, **1907**—Ml
  for obstetric operation without consent of husband, **615**
JAW, resection of three-fourths of, and mode of repair, (159) 1118
  sarcoma of upper, (114) 1404
  teratoma of upper, (71) 1333
JEJUNOSTOMY, (43) **1984**
JEJUNUM, cancer in ileum and, (142) **1338**
  jejunocolic fistula from peptic ulcer in, after gastro-enterostomy, (51) 867
  obstruction of pylorus and, due to gall bladder calculus, (49) 1982
JELLY method of diagnosis of syphilis, (4, 5) 244, ***1225**
JEQUIRITY in ophthalmic work, (133) 1328
JEWISH race, biostatistics of, pertaining especially to immunity and susceptibility, (97) 1667
JIANU-ROEPKE gastrostomy and plastic esophagus operation, modified technic for, (119) 1038
JIREH diabetic food, **923**—P
  Diabetic Food Co. and the "original article" fraud, **1081**—E
JOHNS AND BASS' method of cultivation of benign tertian malarial parasites in vitro, (8) **1398**
  method of cultivation of malarial parasites in vitro, (74) 167, (5) 401, (85) 1987
JOHNS, L. D., Company, **682**—P
JOINT, bony ankylosis of, restoring mobility after, (144) 479, (82) **1922**
  diseases, (66) 404, (14) 1923
  diseases, common, pathology and treatment, (60) 1396
  diseases, hysteric, simulating chronic arthrosynovitis, (145) 638
  diseases, nervous, without signs of tabes, (47) 557
  diseases, *treatment*, (8) 940, (49) 1028, (20) 1105
  fractures, **73**—ab, (12) **1394**, (51) 1839
  fractures in or near, passive motion begun early, value of, (90) **161**
  Hip: See Hip Joint
  lumbosacral, subluxation of, as cause of paraplegia, (6) 1491
  operations, local anesthesia for, [illegible] **1270**
  resectio[illegible]
[illegible] Liga-
[illegible]AMENTS of Mackenrodt, nature of, (25) 1264
  uterosacral, sensitive, short, significance and treatment, (90) 242
  uterosacral shortening, (65) 1107
LIGATURE and suture material, ***1119**
  -passing forceps, automatic, ***1226**
LIGHT, action on tissues, (100) **407**
  artificial, effect on eyes, determination of, (138) 478
  -carrier with lens and rheostat for urethroscopy, ***182**
  injury of eyes by, (88) 1037
  rays, absorbed, therapeutic application of, (161) 92
  seborrheic keratosis following unusual exposure to, ***7**
LIGHTING plant, emergency, for ships, **1957**
LIGHTNING, death by electric currents and, (1, 13) 1108, (8) 1190, (9) **1264**
LIME, requirements of animals, influence of function on, (70) 1028
  starvation, treatment, (52) 1107
  water, appendicitis possibly due to, (81) 783
LIMPING, intermittent, (104) **250**
  intermittent, faradic current for, (189) **1754**
LINDENBAUM, Dr. Moses Harold, whereabouts of, **606**
LINGUATULA serrata found in human intestines in Brazil, (198) 873
LIP, cancer of lower, surgical treatment, (118) 478
  epithelioma, (101) **698**
  epithelioma, complicated by xanthoma tuberosum multiplex, (109) 629
  epithelioma, Grant method in surgery of, **1015**—C
  epithelioma of lower, operation for, ***507**
  epithelioma, surgery of, Stewart and Ryfkogel methods in, **926**—C
  keratoses, seborrheic, diagnosis and treatment, ***1774**
  papilloma of lower, malignant, (108) **1668**
  seborrhea of lower, relationship to epithelioma, (102) **698**
LIPASE and fat of animal tissues, (47) **318**
  immune serum, and hemolysis, (51) **241**
LIPECTOMY, abdominal, (66) 696
LIPINS of heart muscle of ox, (93) 1327

K

KALA-AZAR: See also Leishmaniasis
KALA-AZAR, arsenic in, (22) 1669
  at Tiflis, four cases, (84) 1987
  children, (103) **170**
  experimental facts, (16) 479
  in Southern Italy, (152) 1198
KANSAS medical news, **59**, **136**, **527**, **675**, **912**, **1163**, **1369**, **1468**, **1548**, **1968**
  Medical Society, cooperation of physicians in, **538**—C
  state board October report, **1179**
KAOLIN, toxic action of guinea-pig serum in contact with, (30) 946
KARBENZYM, chemical action of, (111) 328
KARELL'S method of treating cardiovascular disturbance, (115) **1501**
  milk cure in asystole, (130) 407
KENTUCKY Educational Association, plans of cooperative health work that will be attempted by, (93) 1029
  medical news, **293**, **527**, **757**, **840**, **912**, **1084**, **1309**, **1369**, **1648**, **1802**, **1890**
  poliomyelitis and vital statistics law in, **56**—E
  Press Association, practical public health work that will be attempted by, (92) 1029
  preventable diseases in, how United States public health service can help in eradication of, (88) **1029**
  state board December report, **469**
  state board of health, work of, (55) 627
  state department of education to lower sick and death rate of, what will be attempted by, (91) 1029
  what federation of women's clubs will do to conserve health and lives of women and children of, (90) 1029
KERATITIS, interstitial, (17) 401, (10) 786
  parenchymatous, neosalvarsan in, no benefit from, (106) 635, (128) 636
  punctata superficialis, neurotic case of, (3) 780
[illegible] (165)
  [illegible]
  anastomosis between intestine and, (85) **168**
  atrophy of, yellow, acute, (25) 1669 (76) 1743
  botryomycosis of, human, (41) 1832
  calculus obstruction of common duct of, surgical management, (37) 318
  calculus in common duct of, (86) 1107
  cancer in male infant of seven months, (73) 1333
  cancer, mineral elements in, (59) 867
  cancer of pancreas or, (42) 631
  catalase content of blood and, with mouse cancer, (124) 91
  cirrhosis after chronic alcohol poisoning, experimental, (132) 560
  cirrhosis, glycosuria with, (147) 252
  cirrhosis, operative treatment, indications for, (56) 1035
  cirrhosis, spleen enlargement, chronic, with ascites and, (124) **952**
  cirrhosis, tuberculous nature of ascitic fluid with, (62) 248, (83) **558**
  cirrhosis with ascites, autoserotherapy of, (57) **1402**
  cyst, non-parasitic, (16) 1582
  cyst, solitary, **152**—ab
  diagnosis of glandular functions, **287**—E
  disease, acute, curable, (85) 249
  echinococcosis of, (76) 399
  edema and nephritis, **602**—E
  elasmobranch, development of, (2) **1184**
  functional activity of, determined by urobilinogen in urine, (112) **162**
  functional tests of, (14) 780
  functioning, examination of, before general anesthesia, importance of, (114) **1269**
  functioning, ferment test of, simple, (144) **638**
  functions of, in metabolism of fats, experiments bearing on, (76) **1029**
  glycogen in, modification of, after intravenous injection of cholin, (122) 952
  hyperplasia, nodular, associated with lesions in brain, (127) 1270
  in appendicitis, (56) 241
  influence on respiratory interchanges of exclusion of, (82) 249
  injury, bradycardia due to, (135) **1501**
  insufficiency in scarlet fever, (71) **1986**
KIDNEY changes, in tuberculosis, (77) 1267
  classification, diagnosis and therapy of diseases of, method based on functional testing, (114) 251, (32) 1395
  congested, functioning of, (118) 1501
  cystic, (124) 1270
  cystic disease of, pathologic anatomy of, (181) 1676
  cystic, ileus from, (62) 558
  cystic, resection of, successful, (128) 1589
  cysts studding both, (41) 1034
  decapsulation, (101) **1195**
  decapsulation and establishment of collateral circulation, results of experiments on, (151) **163**
  decapsulation in acute nephritis from poisoning, (70) **558**
  disease, (142) 560, **1806**
  disease, albumin determination aid in diagnosis of, (93) 84
  disease and permanently high blood-pressure, (88) **1403**
  disease, commoner forms of, knowledge most useful to general practitioner, (13) **239**
  disease, experimental, (99) 170
  diseases, French progress in, (108) 242
  displacement and malformation of genitals, (177) 562
  double, tuberculosis in half of, (144) 1674
  dropsy, medicinal treatment, (124) 1196
  dystopic, (120) 320
  epinephrin, action of, in *experimental disease* of, (135) 1270
  epithelioma of pelvis, (38) 166
  functioning before phenolsulphonephthalein test, (192) 873
  functioning, blood-cryoscopy for determining, value of, ***188**
  functioning, clinical importance of, **1568**—ab
  functioning, color tests of, (114) 328
  functioning, effect [illegible] chronic, last illness of, (37) 157
[illegible]ISIANA and child labor, **1169**—ab
  medical news, **376**, **675**, **757**, **840**, **1163**, **1369**
LOUISVILLE Eye, Ear, Nose and Throat Society organized, **296**
LOUSE, relapsing fever transmitted by, **1647**—E, (49) **1670**, **2061**
LUETIN skin test in diagnosis of syphilis, (53) 862, (121) 1264, (146) **1329**
LUMBAR muscles, spasm of, ***980**
  Puncture: See Rachicentesis
LUMINAL, **1541**, **1792**
  sodium, **1541**, **1792**
  tablets, **1957**
LUNCHES, school, in elementary and secondary schools, relative physical advantages of, (25) 1492
LUNGS, auscultation of early pathologic changes in, ***2027**
  bottle exercise for, 459, (56) **681**
  cancer, (50) 782, (61) **2071**
  capacity, smallest, compatible with life, **1794**—E
  circulation in, (86) 633
  circulation in, as influenced by differential pressure, (85) 704
  collapsed circulation in, (80) 249
  complications of scarlet fever, (55) **631**, (35) 1191
  Compression: See Pneumothorax, Artificial
  congestion, primary, (126) 1589
  diphtheric infection of, chronic, in woman of 62, (162) 562
  diseases, municipal sanatorium for, **533**
  echinococcosis, (158) 1502
  elementary lesions in, (72) 867
  embolism, (65) 1493
  embolism, operative treatment, **1473**
  emphysema, carbon dioxid eliminated with, proportion of, (126) 560
  emphysema minute-volume and alveolar air in, (19) **397**
  fat embolism of, causes, (134) 1750
  fistulas into, (219) 564
  gangrene, (116) 1749
  Hemorrhage: See Hemoptysis
  hydatid in cicatrix and in, (3) 1264
  induced paralysis of diaphragm in disease of, (124) 1405
  infections, acute, specific treatment, (130) 85
  infections, of pleura and, acute, etiology, diagnosis and treatment, (54) 1666
  injuries to pleura and, (65) 1834
  intrathoracic surgery, literature on, **928**

METHYL alcohol, an act to amend public health law in relation to sale of, **2004, 2008**
alcohol and blood, **1466**—E
alcohol blindness, ***1762**
alcohol, intoxication from peptids and, biochemical differential diagnosis of, (109) 869
alcohol poison, **1231**—E
alcohol poisoning, articles on, **1247**
alcohol poisoning, cases of, **1479**—C
green-pyronin section stain, history of, (126) 1270
METRANOIKTER for dysmenorrhea and sterility, (57) 1982
METRIC system in Middle West, **135**—E
METRORRHAGIA due to atheroma of uterus blood-vessels, (19) **695**
MEXICO, medicine in, practice of, **1247**
registration in, **1558**—C
MEYERS BROTHERS' Druggist and fraudulent advertising, **838**
MICAJAH'S uterine wafers, **65**—P
MICE, group of, with exceptional resistance to mouse cancer, (52) 1187
MICHIGAN medical news, **377, 676, 912, 1163, 1370, 1469, 1549, 1968**
state board October report, **772**
MICROCOCCUS: See also Bacteria
MICROCOCCUS catarrhalis, genito-urinary tract, infection by, (80) 944
symbiosis, **1961**—E
MICRO-ORGANISMS, Brownian movements are due to, (154) 1198
pathogenic, variability of, (111) 559
MICROSCOPY, clinical, books on, **540**
MICTURITION: See Urination
MIDWIFE, average, does she meet requirements of patient in confinement? (38) 1326
elimination of, ***32**
French statistics of physicians, pharmacists, dentists and, **917**
in Massachusetts, anomalous position of, (18) 1105
in Michigan, (67) 241
in Pennsylvania, (143) 479
problem and immigration, (18) 1980
registered, a necessity, (17) 1105
scientific training of, necessity of, (75) 319
teaching of, (81) 1193
teaching of, and prevention of infant mortality, (14) 158
MIDWIFERY as branch of surgery, necessity of recognizing, (9) 1190
MIGRAINE, (97) **635**
optimistic view of, (80) 1107
scintillating scotomata associated with, (91) 864
MIKULICZ' disease in connection with leukemia and pseudoleukemia, (130) 1932
MILITARY service, influence of school life on fitness for, **299**
service, university studies and three-year term of **1087**
surgeons to met in Denver, **1311**
MILK, (56) 398
absence of, in primipara, (8) **396**
action of ultraviolet rays on, **1162**—E
anaphylaxis to, (150) 1751
and promotion of public health, (69) 553
aspiration of, in nursing, (210) **874**
breast, action of shaking up on, (102) 1335
breast, amount of milk sugar in, (94) 250
breast, hemagglutinins in, transmission of, (60) 791
breast, salol-splitting ferments in, significance in salol medication, (120) 407
calculating percentage modifications, short method of, (43) 81
cellular elements in, **1885**—E
certified, production of, (21) 1492
commission, medical, of Boston, (22) 1492
composition of, factors affecting, **752**—E
condensed, sweetened, arrests infant's vomiting, 20 cases, (59) 1266
cow's, and stage of lactation, **596**—E
cow's, bacillus abortus in, (35) 1981
cow's, differentiating reaction in human milk and, (108) 1195
cow's, idiosyncrasy in infants to, (74) 2071
cow's, pasteurized, infant with scurvy fed on, (33) 1395
cure, Karell's, in asystole, (130) 407
MILK dealers, unique organization of, (11) 1184
desiccated, (63) 867
differentiation of spastic strictures in stomach and duodenum, (118) **1336**
finest, in world, **806**—ab
graded, in New York, **1153**—ab
grades of, **521**—E
graphic feeding chart method for calculating percentages and caloric values, (44) 81
inspection of meat and, (39) 1741
mixtures, caloric value of, determining, **228**
of beriberic women, action on frog's heart, (56) **82**
of Indian buffaloes, **1069**—ab
of vaccinated cow, human tuberculosis bacilli in, (19) 786
ordinance, Chicago, new, essentials of, (57) **398**
paratyphoid epidemic traced to, (136) 952
pasteurization and bacteria which may survive it, **1462**—E
pasteurization, control of temperatures in, (15) 1184, **1504**—ab
pasteurization, effect on bacteria in, **689**
protection of, (10) 1919
protein, as corrective of digestive disturbances, **547**—ab, (2) **1324**
protein, inexpensive modification of, (149) **1751**
protein, protein metabolism in infants fed on, (3) **1324**
publicity as factor in securing and enforcing ordinances providing for control of, (115) 1836
raw versus boiled, ***575**
regulations in Fall River, Mass., **1169**—ab
secretion, physiology of, (50) 1264
sediment test, **53**—E
stations or infant mortality, (19) 1664
sterilization, boiling and pasteurization of, ***875**
streptococci from human throat and, statistical study of, (37) **1106**
superheated and heated, effects on infant's nutrition, (4) **940**
-supply, (20, 21) 1492
-supply and streptococcus sore throat, Baltimore epidemic, (39, 41) 398
-supply, local, sanitary control of, through local official agencies, (73) 83
-supply of Ohio, municipal control of, (82) 864
-supply of San Francisco, bacterial content, (30) 317
-supply of Springfield, Mass., improving, methods employed and results obtained in, (36) 695
syphilitic women and infectiousness of their, (60) **1986**
tests for examination of, (41) 477
typhoid epidemic due to, ***1950**
typhoid treated without, (57) **552**
-weed as stimulant for heart, (73) **949**
MIND defect, acquired, (11) 1744
deficiency bill and proposed extension to Ireland, (21) 1264, (41) 1265
disease, **380**
disease, early institutional treatment, necessity of, (52) 944
disease, forms of, in cases with no gross lesions in brain at autopsy, (17) 551
disease in successive generations, anticipations of, (1) **1581**
disease, induced abortion in, (103) 406
disease, responsibility in, (30) 1406
disease, unusual recoveries in, (23) **1495**
disorders, facilitating early treatment of, (17) 1395
emotions in relation to, (5) 1668
gynecologic diseases in relation to mental diseases, (136) 92, (141) 560, (154) 1031
hygiene in widening sphere of preventive medicine, (2) 1258
inferiority, constitutional, (67) 1107
influence of internal secretion on, (130) 91
literature on nervous and mental diseases, (28) 700
organic basis of, (164) 1118
serodiagnosis in disease of, (63) **949, 1813**
suggestion by transference, (34) 1838
MINE accidents, prevention of, American Mine Safety Association and, **1081**—E
danger from explosion of gases in, (211) **874**
gases, resuscitation from, committee on, **2002**
MINERAL, metabolism of, in rachitis, (109) 705
mud at Homburg, (95) 950
springs, Arkansas, medical subjects of interest in South, especially, (76) 319
springs of Saratoga, (84) 1107
waters, salts from, (127) 1196
MINISTER, what is opportunity of, to assist in public health work and how to secure his active assistance, (95, 96) 1029
MINNESOTA medical news, **455, 528, 676, 912, 1084, 1469, 1803**
reciprocal relations of, **927**
state board April report, **1566**
state board January report, **930**
MINOR son away from home, sufficiency of evidence and right of recovery for attendance on, **939**—Ml
MIRROR writing and associated movements without paralysis, (50) 1921
MISSIONARY, Medical, China, Association, **1820**—ab
MISSISSIPPI medical news, **676, 1469**
state board October report, **78**
State Medical Association officers elected, **1390**—ab
MISSOURI medical news, **455, 528, 676, 841, 1163, 1370, 1648, 1714, 1968**
state board February report, **1906**
state board October report, **469**
Valley physicians to meet, **606**
MONILETHRIX, (4) **1031**
MONKEY and man, **1160**—E
MONOCHORD, (110) 1328
MONOCLE instead of spectacles, indications for wearing, (126) 1196
MONSOON, influence on eclampsia, (23) **323**
MONSTER, double, (67) 1193
trunkless, (55) 1034
MONTANA medical news, **377, 913, 1164, 1714, 1890**
state board April report, **1322**
MONTESSORI method from physician's viewpoint, (30) 1395
MORAL and mental training for war, (99) 1397
deficiency and physical development, ***1851**
MORBID dread, (138) 1406
MORBIDITY and morphology, composite study of incidence of disease and physical form in New Orleans, (36) **159**
reports and public health administration, (16) 1831
reports, not mortality statistics, index to prevalence of disease, **463**—C
MORON and study of alien defectives, ***105**
MORPHIN, action on defecation, mechanism of, (102) 328
addiction, inadequacy of Bishop's antitoxin hypothesis to explain symptomatology in, **688**—C
addiction, scopolamin in, disadvantages of use of, (89) **1748**
and hyoscin (scopolamin) in labor, **1814**
constipation and, **1711**—E
detection in body, **466**
habit, prevalence of, **1363**—E
in general practice (78) 1493
intravenous injection of ergot and, in hemoptysis, (118) 1843
law and sale of, **228**
MORPHOLOGY and morbidity, composite study of incidence of disease and physical form in New Orleans, (36) **159**
MORTALITY in Prussia, **609**
Infant: See Infant Mortality
of middle life in great cities, **140**
rates, existing, fallacies of, (24) 1105
statistics on tuberculosis, misleading, (17) 1831
MOSQUITO: See also Anopheles
MOSQUITO and leishmania, (144) **252**
anopheles, asymbiotic relations of malarial plasmodium to man and, teleologic working theory of, (17) 1033
catching in dwellings in prophylaxis of malaria, (12) 1026
destruction of, **1245**
fish to destroy **1348**—ab, **1812**—C
larvae, sex of, (6) 401
MOSQUITO, malaria and, in Greenwick, **919**—ab
net as protector against malaria in 1888, (57) **2070**
-proof and storm-proof house for tropics, new, (3) **1397**
MOTHERS, Imperial Institute for care of Infants and, **845**
impressions on, or accidental coincidences, which? (140) 162
nursing, and typhoid vaccine, **1560**
nursing, care of, and preparatory treatment for breast nursing, (15) 396
passage of carbon dioxid from, to fetus, (56) 867
quadruplets and their, (125) 1673
MOTHERSILL'S seasick remedy, **1319**
MOTORISTS, women, **597**—E
MOUNTAIN sickness, transient upset of kidney functioning, (167) 1675
MOUTH breathing, persistent, following adenoidectomies, (51) 696
condition of, as cause of disease, **692**—ab
dermoids of floor of, (96) 1500
eczema of, as manifestation of congenital syphilis, (24) **1330**
from diagnostic standpoint, (97) 629
gag with permanently attached tube for continuous etherization and new tonsil grasp, (111) 1328
healthy, necessity of, in treatment and prevention of diseases, (66) 83
herpes of face and, in relation to infections with colon communis bacilli in women, **1234**—E
hygiene, (111) 320, (32) 1260
infection and constitutional infection, (25) 781
infections, etiology and effect on vital organs, ***503**
infectious diseases treated through, neglect of, (79) 628
inspection in treatment of patients, value of, **1680**—ab
Leishmaniasis, Indian, (13) 946
mucous membrane disturbances of tongue and, in pernicious anemia, (103) 698
neuroses of throat and, (27) 317
prophylaxis, (54) 696
tongue and, in disease, **147**
tumor of pharynx and, malignant, operative treatment, (21) **1583**, (36) 1669
tumor of tongue and, malignant, (105) **1029**
MOVEMENTS, mirror writing and other associated, without paralysis, (50) 1921
of upper extremities, neurologic case demonstrating associated, (83) 629
MOVING Picture: See Cinematograph
MUCH granules, **1247**
-Holzmann psychosis test, **1813**
technic for examination of sputum, (59) 1332
MUCOCELE anterior ethmoidal cells, (23) 244
appendix, removal of, (70) 1167
gall bladder, (12) 1264
MUCOUS MEMBRANE and blood-stream as alternative routes of infection, (9) **1329**
electrical operative treatments for diseases of skin and, (41) 1110
genito-urinary tract, exudative diathesis in, manifestations of, (107) 1195
iodin for, in gastro-intestinal operations, (138) 1197
melanosis of, of large intestine, (205) 874
nose, leishmaniosis of, ***898**
tongue and mouth, disturbances of, in pernicious anemia, (103) 698
MUCUS, duodenal, in vomit, (66) 325
extractor in asphyxia neonatorum, (3) 322
MUMFORD'S "Table Talk" and the American Medical Association, **77**—ab, **222**—ab
MUMPS: See Parotitis
MUNICH Hospital, centennial of, **1311**
MUNICIPALITY liable for typhoid in water, **70**
MURPHY button to effect duodeno-jejunostomy after gastrojejunostomy (12) **317**
MUSCLE, biceps, sarcoma of both, primary, (23) 401
brain in training, participation of, (57) 632
changes brought about by intermuscular injection of calves with virus of contagious pleuropneumonia, (114) 1836

MUSCLE changes in electric responses in, with diseases of various organs, (106) 90
  creatin content of, under normal condition, relation to urinary creatinin, (29) 626
  debility of, adrenal organotherapy *in*, (48) **790**
  degeneration and osteoma, (62) 398
  degeneration *and rigidity in lung* tuberculosis, theory *of*, **1241**—ab
  drainage, sub-temporal, *by aid of* silver wire drainage mats in con*genital hydrocephalus*, (7) **1104**
  dystrophy of bone and, dwarf growth from, (74) 867
  electrical testing of, (22) 630
  eye, development of prootic head somites and, in chelydra serpentina, (4) 474
  eye, paralysis of, in children, (160) **92**
  eye, technic of advancement, (143) 243
  flap *to arrest hemorrhage from* various sinuses of dura mater, (109) *1842*
  grafting of bone and, **1473**
  heart, (94) 161
  heart, lipins of, of ox, (93) 1327
  levator ani, intra-abdominal myorrhaphy of, for anteversion of uterus, (100) 328
  lumbar, spasm of, ***980**
  ossifying disease, traumatic, (98) **90**
  plain, *in* guinea-pig, anaphylactic reaction of, (35) **861**
  plastic operation on, for face paralysis, (43) 1926
  plastic operation on parasacral hernia, (115) 483
  position of Meigs *on* behavior of, restatement of, **688**—C
  quadriceps transplantation in paralysis, (34) **781**
  re-education *of, in tabetics, (144)* **252**, (85) **634**
  research on, with aid of filament galvanometer, *(128) 485*
  sarcoma, primary, (161) **1118**
  spinal, atrophy of, progressive, spinal cord changes with, (90) 1672
  spinal, sign of pleurisy, (17) **2069**
  supraspinatus, tuberculosis of, (7) 1491
  tensor tympani, contraction of, volitional, (51) 2070
  toxic action of extracts *of* normal organs and, (108) 869
  weakness in back, hygiene of, (157) **872**
MUSEUM Association, Medical, **1552**
  of natural history, coccaceae in collection of, systematic study of, (44) 1920
  of Royal College of Surgeons of England, Hunterian oration on Hunter and Lister and, (1) 945
MUSHROOMS, permitting in nephritis, *inadvisability of*, *(92) 1587*
  poisoning, **1154**—T
  poisoning by inhalation, (115) **1336**
MYALGIA thermica, and character and genesis of thermic myospasms, (130) 401
MYASTHENIA, bulbo-spinal, postoperative, case of (46) 1034
  gravis, pathology of, **1910**—ab
  thymectomy in exophthalmic goiter with, (150) **561**
MYATONIA, congenital, (46) **701**, (213) 1754
MYCETOMA in *America*, ***1339**
MYCOSES, treatment, (87) 704
MYELITIS, migrating, (90) **327**
  neuritis and, of psychic origin, **176**—ab
MYELOCELE and meningo-encephalocele, (11) 864
MYELOMA, multiple, (144) 162, (18) **1744**
  multiple, association with Bence-Jones' albumose in urine, (15) 1330
  multiple, with numerous spontaneous fractures and albumosuria, (14) 625
MYIASIS due to eristalis, critical study of, (20) 1739
MYOCARDITIS, chronic, spontaneous rupture of mitral valve in (136) 252
  pain and other clinical manifestations of, **1483**—ab
MYOCARDIUM involvement, certain physical signs of, (9) 1108
  toxic changes in, histogenesis of, (122) 1270
MYOCLONUS, ocular, (26) 556
MYOFIBROMA, uterus, accompanied by *pregnancy*, (143) 322
MYOMA and tuberculosis of female *genitals, (121) 1589*
MYOMA, breast and genitals, roent*otherapy of cancers and, (87) 1841*
  influence on blood-supply of uterus, special reference to abnormal uterine bleeding, (85) **783**
  pregnancy in uterus with, size of adult's head, (89) 169
  uterus cervix, 132 cases, (147) 162
  uterus, 18½ lbs., and gall-bladder calculus, (52) 477
  uterus, mucous polypi with, (20) 556
  uterus, roentgenotherapy *for, (166)* 487
  uterus, roentgenotherapy of, relation between sarcoma and myoma *of uterus and its bearing on, (102)* **1263**
MYOPIA, etiology of, *500 cases,* (22) 1399
  treatment, *(94) 1334*
MYORRHAPHY, intra-abdominal, of levator ani for anteversion of uterus, (100) 328
MYOSITIS from excessive use of group of muscles involved, (141) 1197
  ossifying, progressive, multiple, (44) **948**
  ossifying, traumatic, ***203**, (6) **1104**
MYOTONIA, *atrophic*, (94) **1841**
MYRINGOTOMY in acute otitis media, inadequacy of *drainage obtained* by. method of overcoming difficulty, (36) *943*
MYXEDEMA: See also Acromegaly, Cretinism; Goiter, Exophthalmic; Infantilism
MYXEDEMA, (22) 556
  cerebellar motor symptoms in. (134) **1844**
  congenital, in children, thyroid *grafted* into spleen or tibia in, (121) **1405**
  recovery and seven years' after*care notes*, (8) 1979
  thyroid treatment in, thirteen years of, *(61)* ***1266***
MYXOFIBROMA of nasopharynx, (24) 81
MYXOMA, congenital, of feet, (3) 1576
MYXOSPORIDIA in gall-bladder *of* fishes, effects of, (7) 401

N

NAILS, dystrophy of hair and, three cases in a family, ***27**
  occluding third bronchial ramus, upper bronchoscopy, recovery, (135) 1030
NAMES, fanciful, of secret products, **453**—E
  nostrums with misleading **526**—E
NAPHTHALIN *poisoning*, (100) 635
NAPOLEON THE GREAT, post-mortem *examination* of, history and nature of certain specimens alleged *to have been obtained* at, (4) 479
NARCOLEPSY, case of, (104) 869
NARCOSIS, lipoids in, particularly lecithin, (41) **627**
NARCOTICS, abuse of, **679**
  addiction, treatment, ***1933**
  bill introduced in Congress, **310**—ME
  influence of fats on action of, **56**—E
NASOPHARYNX, diphtheria of ear *and*. (59) 1580
  myxofibroma, (24) 81
  sarcoma, (41) 240
  tumors, access to, by transverse *pharyngotomy*, (88) 483
NATIONAL Association for Prevention of *Infant* Mortality, **1805**
  Association for Study and Prevention of *Tuberculosis*, meeting in Washington, **1311**
  Conference of Charities and *Correction* meeting, **1471**
  guard regimental surgeon, problems of, on maneuver campaign, (96) 478
  League for Medical Freedom and national *department* of health or organized medicine vs. *organized* quackery. (64) *553*
  League for Medical Freedom and their *subsidized newspapers, the* great *industrial iconoclasts of the* century, (98) 84
  mercantile rating and credit agency, **310**
NATURE, blunders made by, (63) 1262, (92) 1835
NAVICULAR bone, fracture of, in children, (61) 702
NAVY, athletics *and* health *in*, ***131***—E
  British, health of, **531**
  tuberculosis in, (110) 794
  United States, hospital construction in, recent, (122) 400
  United States, hospital ship *for*, plans and description of, (125) 401
  United States, *sanitation in*, advances in, (56) 944
NEBRASKA medical news, **156**, **528**, **678**, **913**, **1084**, **1164**, **1469**, **1648**, **1714**
  state board February and March *report*, **1488**
  state board November report, **154**
NECK, *abscess in*, deep, treatment, (198) 1754
  cysts and fistulas in, (45) **948**
  cysts of congenital origin, (9) 1744
  malformations, congenital, (45) 866
NECROPSY blood findings in diph*theria*, (186) 1753
  examinations in United States, ***1784**
  in medical education and practice, past and present position of, ***1784**
  statistics of, in large hospitals of United States *and abroad*, ***1784**
NECROSIS, cartilage, arthritis de*formans* due to, (53) 948
  fat, tumor from, (109) 559
  of fat tissue after suturing, (136) 330
  pancreas, abscess in omentum *sac* after, (139) 1750
  symmetrical, *of cortex of kidneys* with puerperal eclampsia and sup*pression* of *urine, (21)* ***1837***
  vertebrae, following scarlet *fever*, (12) 164
NEEDLE for locating foreign bodies *in* soft parts, (82) 168
  found in intestine and *appendix* during hysterectomy, (12) **535**, (23) 1033
  holder for submucous resection of nose septum, ***1295**
  lumbar-puncture, new, ***1204**
  sewing-machine, impacted, duodenotomy for removal of, (64) 1326
NEGRI bodies in hydrophobia, (49) 240, (40) 866
NEGRO and Caucasian, therapeutic comparison, medicinal and otherwise, as between, (80) 783
  laborers, arthritis, acute, among, *on Canal Zone*, 100 cases, ***1065**
  leukoderma in, excessive, **1246**
  paralysis agitans in, ***43**
  relation to public health in South, (10) 1492
  spotted, family of, **673**—E
  syphilis, annular, papular, in, ***1420**
  venereal diseases in, special reference to *gonorrhea, (66)* 1922
NEMATODES, cancer induced in rats by feeding with, (94) 1748, (130) **1844**
  in *hyperplastic thyroids of dogs*, **2022**—ab
NEOPLASMS: See Tumors
NEOSALVARSAN, (75) 1742, **2061**
  absorption of arsenic *following* intramuscular injections of salvarsan and, (53) **241**
  and salvarsan in congenital syphilis, (185) **873**
  and salvarsan in pregnancy and puerperium, (55) 1111, (43) **1331**
  by-effects *of*, **919**—ab
  experiences with, (68) 1107
  in parasyphilis of nervous system, **1818**—ab
  in parenchymatous keratitis, no benefit from, (106) 635, (128) 636
  in syphilis, intravenous administration, (5) 1329, (30) 1920
  injection of, technic for, (59) **1193**
  intoxication from, severe, (112) 1037
  more toxic than salvarsan, (52) *1985*
  parasite-attracting *action of atoxyl* and, (168) 562
NEPHELOMETRY in study of proteases and nucleases (58) 318
NEPHRECTOMY, (106) 161
  after history *of cases*, **1474**
  for polycystic condition of kidney, *(16) 1324, (73) 1499*
  for tuberculosis of *kidney, unilat*eral, *danger in future pregnancy* another argument in favor of, (37) **1496**
  six, (150) 1674
  with *bilateral kidney* tuberculosis, (138) **408**
NEPHRITIS, (55) 477
  active expiration as sign of, (181) *1753*
NEPHRITIS, acute, *from* mercury poisoning, operative treatment, experimental *research on, (71) 867*
  research on, (71) 867
  acute, operative treatment, (70) **558**
  acute, with uremia due to salvar*san*. (84) *629*
  arterial hypertension in, pathogene*sis of*, (192) *563*
  children, acute, primary and sec*ondary*. *protoclysis* as curative and prophylactic agent in, (152) **243**
  chronic, (74) 1580
  chronic, alternating pulse in, (26) 789
  chronic, dietetics and treatment, **1732**—ab
  chronic, protein-free diet in, favorable influence of periods of, (48) **1833**
  diagnosis, ***980**
  edema and, colloid-chemical theory, ***345**, ***348**
  edema of liver and, **602**—E
  elimination of nitrogen in, intravenous administration of diuretics, (78) 704
  experimental, acute, glomerular lesions in, in rabbit, (41) 1981
  helminths in boy aged 5 causes toxic, (137) 252
  hematuria, unilateral, in chronic, (24) **552**
  hydruric, chronic, hepatic, asystole *in*, *(32) 1033*
  hypertension *due to*, clinical and experimental studies, (1) **1738**
  internal *treatment*, (73) 1580
  interstitial, *chronic*, (52) 1395
  kidney functioning in, (185) **1753**
  latent, induced albuminuria as test for, (120) **952**
  leukocytes in *acute infectious* diseases and, destruction of, (39) **1838**
  mushrooms permitted *in*, inadvisability of, (92) 1587
  nitrogen retention in, **368**—E
  operative *treatment*, (73) **1193**, (90) **1195**
  othygroma nephriticum, ***123**
  polyuria with subacute, experimental, (86) 1402
  prognosis in, (154) **1675**
  rest in, **1732**—ab
  retention of water, salt or nitrogen in, (52) 701
  serotherapy in, (122) **251**
  symptoms, causes of some, (55) 160
  syphilitic, acute, soon after *infection*, (83) **1037**
  syphilitic, spirochetes in urine with, (109) 406
  theobromin sodium *salicylate* in acute experimental nephritis, therapeutic value of, (6) **1979**
  transmissibility of, **616**
  treatment, (136) **560** ***1682**
  with ascites, bilateral hydrothorax and general edema in *secondary* syphilis, (18) 1330
NEPHROLITHIASIS, seminal calculi simulating, (98) 1262
NEPHROLYSINS, (86) 249
NEPHROPEXY and nephroptosis, ***643**
  fascia hammock for, (62) 1332
  lumbar, technic and experimental and clinical experiences, (164) 1271
NEPHROPTOSIS and nephropexy, ***643**
NEPHROSIS, chronic, in children, *(107)* ***705***
NEPHROTOMY, *dangers of*, (106) 559
NERVE, acoustic, *affections of*, curable, (106) 1328
  auditory, Wassermann *reaction* and salvarsan in diagnosis and treatment of syphilis *in ear, nose and* throat affections, special reference to, (11) 81
  blocking and local anesthesia, (50) 1839
  blocking at a *distance*, *pain* abolished after operation by, (35) 1832
  blocking, brachial plexus, injury *from*, (77) **2072**
  blocking for painful laryngitis, (37) **700**
  cells, new formation of, in isolated part of *nervous portion* of hypophysis-tumor in *acromegaly* with diabetes, (2) **1663**
  cranial, fifth, *in* tic douloureux, dealing with peripheral branches, new method, (48) **1028**
  dental, inferior, tic douloureaux of, operative treatment, (62) 606
  ganglia in heart, morbid histology of, (51) **1188**

NERVE ganglion, course virus of herpes zoster takes to reach, (47) 1187
grafting, (47) **324**
grafting, improved technic for, (104) **170**
irritability of, excessive, in tetany, (123) 1115
leg, effectual and harmless blocking of, *technic for*, (64) **703**
lesion in certain pathologic conditions of blood-vessels, indications of, (21) 1983
mental, ethyl chlorid anesthesia of, (107) 1842
oculomotor, bilateral, *from* softening in each oculomotorius nucleus, **1910**—ab
oculomotor, paralysis of, cyclic, (117) 1931
of cauda equina, disease of, peculiar and undescribed, **1819**—ab
optic, atrophy of, after injection of olive oil and lanolin for removal of wrinkles, (83) 553
optic, atrophy of, familial, (143) **707**, (135) 952
optic, atrophy of, with steeple and pointed skulls, (104) 328
optic, ganglionic glioneuroma of, ***363**
optic, tumor of, microscopic demonstrations of, (28) 397
paralysis of sixth, anatomic predisposition to, as complication of spinal *anesthesia*, (158) 708
paralysis, recurrent, due to circulatory lesions, recent therapeutic measures, (43) 862
phrenic, paralysis of, after blocking brachial plexus, (156) **1675**
plexuses, pain due to metastases pressing on, intractable and persistent, relief of, ***267**
radial, paralysis of, postoperative, prevention of, (86) **947**
Root; Spinal Section of: See Rhizotomy
sciatic, blocking, technic for, (103) **951**, (142) 1406
sciatic, disposition of femoral artery and, anatomic considerations of, (23) 1191
superficial, and technic for local anesthesia, (132) 1501
superficial, non-medullated, (83) 1402
supply of inferior turbinal as shown by vital staining, (17) **865**
suprascapular, paralysis of traumatic, isolated, (105) 869
surgery, rational, (77) **793**
suture of, after-effects of, (47) 1839
tissue, growth outside of organism, (90) 89
tissue, preserving for subsequent chemical examination, two methods of, comparison, (91) 1327
trigeminal, segmental distribution of spinal root nucleus of, (32) **861**
tumors of large, associated with fibroma molluscum, largest specimen on record, **936**—ab
vagus, circulation disturbances from sudden contraction of, (57) **702**
vagus, influence on faradized auricles in dog's heart, (43) 1261
vagus, reflex stimulation of, in treatment of disease, (31) 324
NERVOUS and mental diseases, early institutional treatment, necessity of, (52) 944
and mental diseases, literature on, (28) 700
and mental symptoms in Addison's disease, (13) 243
and vascular disease in syphilitics, (97) **1403**
conditions, functional, (65) 863
conditions, general, index of, **1800**—E
diseases and epilepsy, crotalin in, (94) 399
diseases, associated, of women, (78) 1580
diseases, increased, in army, causes of, **533**
disorders, functional, roentgenoscopy of gastro-intestinal tract in some types of, **1911**—ab
system and alcohol, (132) *91*
system and internal secretion, (90) 1193
system and salvarsan, (61) 1586
system as *affecting* symptomatology of disease and *influence* of disturbance in its *functions* on morbidity, (11) 551
NERVOUS system, autonomic, in children, atropin, pilocarpin or epinephrin tests for, (121) 1931
system, autonomic, in course of lung tuberculosis, (133) 1674
system, central, and heat regulation, **520**—E
system, central, chemical differentiation of, (90, 91) 1327
system, central, destructive influence of long-continued minute doses of intestine poisons on, in rabbits and guinea-pigs, (30) 1926
system, central, eye-strain simulating grave organic disease of, (72) 88
system, central, peripheral lesions affecting, operative treatment, (119) **952**
system, central, predisposition of, to disease, (96) **1588**
system, central, spirochetes in, in progressive paralysis and tabes, (75) **1586**
system, central, syphilitis of, (158) 488
system, central, syphilis of, direct treatment, **1576**—ab
system, central, syphilis of, salvar*san in*, (38) 1741
system, central, syphilitic origin of, diseases of, (83) 327
system, drug action, selective, on, aid to diagnosis, **1484**—ab
system, main regulation of heat loss by control of, over cutaneous circulation and sweat-glands, **1794**—E
system, organic diseases of, and alveolar *pyorrhea*, possible relationship of, ***1779**
system, parasyphilis, early signs of tabes dorsalis and, (77) 1667
system, parasyphilis, neosalvarsan in, **1818**—*ab*
system, parasyphilis, rarer mani*festations of*, (11) **629**
system, peripheral, and lung tuberculosis, (58) 552
system, peripheral, angioma of, (67) 702
system, sensory changes in diseases of, diagnostic value of, (10) 1744
system, sexual disorders and disease *of*, (119) 1328
system, sympathetic, literature *on*, **147**
system, syphilis, (127) 699
system, syphilis, in infants and chil*dren*, (22) 86
system, syphilis, intramuscular injection of mercury in, (79) 1667
system, tuberculosis with disorders of, (50) 480
NERVOUSNESS *in children, prevention*, (165) 163, (38) *696*
NEURALGIA, epinephrin in arthralgia and, (97) **1335**
from calcification of gasserian ganglion, **183**—ab
hyoscin-morphin anesthesia for alcohol injection in, (26) 1330
pathology of, (126) *1323*
trifacial, (51) 324, **1388**—ab
trifacial, alcohol injection in, (74) **1036**
trifacial, alcohol *injection* into gasserian ganglion *in, new method* of treatment, ***1354**, **1725**—C, (59) **1840**, **2061**
trifacial and facial hemispasm, treat*ment*, (46) 631
trifacial, electrolysis in, (90) **950**
trifacial, high-frequency *currents in*, (14) 243
trifacial, superficial injection of osmic acid and alcohol in, (71) 1666
NEURASTHENIA, **900**—T, (63) **1112**
causative and curative *factors*, (25) 475
diagnosis, (37) 1400
diagnosis, prognosis and treatment, (30) 1496
diet for, roasted wheat grains in, (129) 1116
influence of motor insufficiency of stomach in headache and, (98) 242
morbid conditions with symptoms resembling, differential diagnosis, *(116) 1668*
puberty and menopause in relation to, (25) 1330
sexual, (143) **1502**
sexual, in men, ***1869**
sexual, psychotherapy in, (47) 1326
surgeon's diagnosis in, (22) **1027**
NEURITIS, brachial plexus, and polyneuritis following pneumonia, (91) **704**
brachial plexus, symmetric, primary, as symptom of tardy syphilis, (114) 407
in children, *multiple*, (79) 1262
of psychic origin, **176**—ab
post-typhoidal, unusual case, (36) 1632
retrobulbar, of toxemic origin, (147) 243
ulnar, *following typhoid*, (183) 488
NEUROBLASTOMA, recurrent, of scapular region, ***337**
NEURO-EPITHELIOMA, gliomatous, (167) 872
[illegible] ele- [illegible] *of*
NEUROFIBROSARCOMATOSIS, peripheral, multiple, two cases of, (154) 1502
NEUROLOGY, (15, 17) 323, (22) 630
case histories in, (32) **1492**
hematology *in service* of, (151) 870
in seventeenth century, (142) 1674
of visual system, (56, 63, 65) 87, (30, 34, 38) 324, (35, 39, 44) 631, (31, 33) 866
sensory disturbances, (19) 630
NEUROPLASTY in spastic contractures, (9) 1491
NEUROSIS, anxiety, and anxiety hysteria, relation between, (31) 1920
diaphragm-heart, (88) **634**
from fright, treatment, (99) **635**
heart, (126) **485**
heart, psychogenic, sexual, (77) 1671, (86) **1987**
industrial, nature and treatment, (106) 1029
mouth and throat, (27) 317
psychoses and, (8) 551
traumatic, (117) **91**, (23) 2067
traumatic, dragging through 18 years' *litigation for damages*, (57) **1986**
traumatic, retrospect and forecast, (13) **941**, **1393**—ab
unconscious factors in, (48) 1982
NEVADA state board May report, **1826**
NEVI, carbon dioxid in, (48) 160
maternus removed by carbon dioxid, **1813**
pigmented, melanotic sarcomas due to irritation of, ***341**
NEW HAMPSHIRE medical news, **1549**, **1715**
state board December report, **692**
NEW JERSEY medical news, **677**, **758**, **841**, **1470**, **1715**, **1803**, **1890**
NEW MEXICO medical news, **913**, **1890**
state board January report, **1179**
state board October report, **154**
NEW YORK action of, on Friedmann *Institute shows* need of endowing *boards of health* with power to cope with such situations, **1800**—E
division, M. R. C. U. S. Army, (91) 1189
medical news, **60**, **137**, **215**, **294**, **377**, **456**, **528**, **677**, **758**, **842**, **913**, **1005**, **1084**, **1164**, **1235**, **1310**, **1370**, **1469**, **1550**, **1648**, **1715**, **1803**, **1891**, **1969**
NEWSPAPERS, absurd mistakes in medical matters in, **1230**—E
and nostrum advertising, **599**—E, **613**—P, **671**—E
and reports of unauthenticated cures, **452**—E
and suicide, **1713**—E
correctly classifies Friedmann, **1713**—E
fakes and digestible bread, **521**—E, **1379**—C
layman and medical advertisements, **599**—E
sensationalism and science, **211**—E
NIPPLE, epithelioma, primary, *in* girl of 11, (11) **2068**
retraction of, non-malignant, (102) 1108
NITROBENZOL *poisoning*, (105) *1751*
NITROGEN and fat metabolism in congenital absence of bile ducts, (6) 238
balance, effect of ligation *of renal* arteries on. (44) 1741
excretion subsequent *to ligation of* successive branches of renal arteries, (45) **1665**
in nephritis, elimination of intravenous administration *of diuretics*, (78) 704
metabolism of fat, calcium and, in infants, (70) *1930*
NITROGEN, residual, technic for re*moving* albumin and determining, in organic fluids, (139) 1116
retention in nephritis, **368**—E
retention of salt and, in bottle-fed infants, (47) 247
retention of water, salt or, in *nephritis*, (52) 701
NITROGENOUS bodies in blood of cachectic infants, (51) 247
compounds in feces and infantilism, nature and origin of, (47) 249
NITROUS OXID-OXYGEN and ether vapor anesthetics, improved technic of, *(72)* 83
anesthesia, (86) 242, (127) 401, (71, 72), 783, (58) 1262
anesthesia, advantages and disadvantages of, from surgical viewpoint, (86) 242
as anesthetic for dentistry and surgical purposes, (8) 161
essence of orange ether and sequestration in general anesthesia for operations in upright position, (72) 1922
NODE of Ranvier, function of, theoretic *considerations of*, (33) 861
NOGUCHI butyric acid test, **1813**
NOISE and insomnia, (43) 393
eliminating from Baltimore, (15) 393
loud, injurious effects on organ of hearing, (44) 393
NOMA, (61) 944, (82) 1957
NORTH AMERICAN and nostrum ad*vertising*, **671**—E
NORTH CAROLINA medical news, **60**, **295**, **456**, **914**, **1236**, **1470**, **1715**, **1969**
NORTH DAKOTA medical news, **529**, **1236**, **1371**, **1550**, **1715**
state board January report, **930**
NORTH PACIFIC *Surgical* Society, new officers, **218**
NORTHEAST Pediatric Society meets, **457**
NORTHWESTERN surgeons elect officers, **139**
NORWAY, first death after salvarsan injection in, (134) 1932
mortality from tuberculosis in insane asylums and prisons of, (209) 874
poliomyelitis, acute, in, (103) **1037**
NOSE, aches and pains connected with eye and, (2) 915
bismuth paste in ear and, (101) 399
cancer of accessory cavities and, nine operative cases, (71) 1927
chloroform anesthesia in surgery, (68) 628, (30) 861
cough caused by throat and nose reflexes, (28) 861
deformities and paraffin prosthesis, (54) 1111
deformities, correction of, ***179**, (77) 1499
deformities within, their attendant sequelae, (129) 1836
diphtheria bacilli in secretions of throat and, in infants with nutritional disturbances, (111) **1269**
diphtheria in public schools, (56) 1580
dressings, use and comparison of, (97) 698
dysmenorrhea relieved by treatment of, **1736**—ab
eye disturbances due to diseases of, (14) 1739
eye symptoms from disease of accessory sinuses and, (109) 794, (89) 1667
Hemorrhage: See Epistaxis
hot air and iodoform in conservative treatment of some conditions of ear and, ***1946**
influence on pulmonary râles, (78) **864**
journals on eye, ear, throat and, **1320**
leishmaniasis of mucosa of, ***898**
lupus, (83) 1194
lupus, *nascent iodin treatment*, (7) 1494
membranes and membrane formation in throat and, (61) 477
meninges, exposure, accidental, during operations on, (21) 165
morphologic changes in face and, due to development of brain, (7) 81
narrow, (43) 552
obstruction, breast-nursing and orthodontia, **301**—ab
obstruction, defects due to, (71) **477**
obstruction, orthodontia for, plea for early recognition and correction of faulty maxillary *development* (107) 161

- NOSE obstruction, throat and ear diseases due to, (39) 781
  - operations, minor, on ear, throat and, (137) 1590
  - operations on, for headache, (35) **2070**
  - operations on interior of, (158) 486
  - operations on throat, ear and, after-treatment, (26) 165
  - packing, efficient and easily removable, (58) 1028
  - restoration of, by pedunculated flap of skin over sternum, (71) **703**
  - restored by rhinoplasty with finger, ***730**
  - rhinoplasty and bone transplantation for restoring entire, case of, ***728**
  - screw worm in, (114) 1667
  - secretion, finding virus of poliomyelitis in, human carrier, ***1611**
  - septum, (83) 399
  - septum, deficiency of, interventricular or interauricular, (50) 1326
  - septum deviated, its influence on general health, surgical treatment, (27) 1105
  - septum, perforation of, causes, (68) 1396
  - septum, sloughing of, after submucous resection, (15) 941
  - septum, submucous resection of, (132, 133) 162, (32) 943, **1250**—ab
  - septum, submucous resection of, blunt dissector for, (134) 243
  - septum, submucous resection of, needle-holder for, ***1295**
  - septum, suturing after submucous resection instead of packing, (17) 941
  - sexual apparatus in connection with ear, throat and, *(112) 1030*
  - sinuses, accessory, (77) 1834
  - sinuses, accessory, disease of, (113) 1030
  - sinuses, accessory, disease of, modern history of, (33) 933
  - sinuses, accessory, disease of, surgical management, (134) 162
  - sinuses, accessory, inflammation of, *acute*, treatment, (90 1108
  - sinuses, accessory, *inflammatory* affections of, in children, (37) **696**
  - sinuses, accessory, sections of temporal bone-dry specimens showing, exhibitions of, (82) 1107
  - sinuses, suppuration in, (34) 1110
  - sinuses, suppuration of, diffuse osteomyelitis from, (9) 479, (15) 1109
  - source of infection in chorea and acute rheumatism, (68) 1986
  - specialist, ethical problems confronting, (111) 1189, (107) 1328
  - surgeon, needs of, in general hospitals, (146, 152) 1030, (15, 48) 1395, (82) 1580
  - syphilis of throat and, (112) 400
  - teeth growing in fossa of, (55) 862
  - throat and, (54) 1395
  - throat and ear, affections of, including accessory sinuses, conservation in treating, (100) 320
  - tumors of, treatment, (127) 1038
  - turbinate, enlarged *inferior*, operation, technic of, (212) 1754
  - turbinates, operation on inferior and middle, indications for, (92) 1667
  - Wassermann reaction and salvarsan in diagnosis and treatment of syphilis in affections of ear, throat and, special reference to *auditory* nerve, (11) 81
  - work in general practice, (37) 1110
- NOSTRUM: See also Patent Medicines; Proprietary Medicines
- NOSTRUM advertising, Advance of Chicago drops, **1801**—E
  - advertising in Birmingham Ledger, **1899**—P
  - advertising in medical journals, **53**—E, **57**—E, **65**—P
  - advertising in medical journals and editorials in same journal, **1368**—E
  - advertising in newspapers, **599**—E, **671**—E
  - advertising in religious press and American Medical Association, **1161**—E
  - and insurance act, large decreases in sales, **1238**
  - and Quackery, second edition of, **851**
  - British *government* committee on, **1238**, **1311**, **1472**, **1718**, **1970**
  - Detroit Saturday Night's fight against, **1711**—E
  - evil and lay press, **613**—P
- NOSTRUM evil, public and profession on, **602**—E
  - evil, what local society can do in combating, **688**—C
  - evil, world-wide movement against, **1725**—P
  - fanciful names of, **458**—E, **526**—E
  - in Australia, **844**
  - vender, improper use of medical certificate by, **1086**
- NOVELS, physician and medical matters in recent plays and, (128) 1501
- NOVOCAIN and sodium injection for sciatica, (133) **560**
  - injection, sequel to, (19) 86
  - serum as solvent for, **147**
  - solution, old, injury from, (116) 1749
- NUCLEASES, (60) 313
  - nephelometry in study of proteases and, (58) 318
- NUCLEI test, Schmidt's, of pancreas functioning, (142) **1117**
- NUCLEIN metabolism in gout, (137) 560
- NUCLEOPROTEIN of plague bacillus, attempt to separate antigen from, by filtration through gelatin, (21) 1744
- *NURITO*, **1319**
- NURSES, correspondence schools for, **1712**—E
  - trained, in Austria, (119) 1931
  - visiting, and tuberculosis control, (77) 242
  - working conditions of, improved, **221**
- NURSING, color problem in South Africa, **1894**
  - problems of, (80) 477
  - Rhode Island College of, get-rich-quick scheme of, **600**—E
- NUTRITION, accessory factors in, recent work on, (6) 2066
  - and growth of children, (169) 1753
  - *and immunity* **1651**
  - and lipoids, **669**—E
  - anomaly in, congenital, new, **668**—E
  - colostrum as, (67) 2071
  - disorders of, infant, pathology of, and enzymes, **600**—E
  - effect on production of enzyme tannase, (80) 1327
  - fats and carbohydrates in, double function of, their nutritive properties, **548**—ab
  - infant's, effects of heated and superheated milk on, (4) **940**
  - infant's, influence of psychic factors on (99) **1930**
  - investigation of Illinois Pellagra Commission, **833**—E
  - nonsense in leading articles on, in British scientific journal, **1642**—E
  - of eggs of Schistosomum japonicum and changes they undergo under action of various physical and chemical agents, (48) 1111
  - *parsimony in*, (33) **1492**
  - problems in, (26) 1980
  - simplified, striking experiment in, **1464**—E
- NUTS, "Hell-oil," poisoning from, (144) 1502
- NYSTAGMUS and paracoustic vertigo, (21) 81
  - as *focal symptom*, (138) 560
  - in febrile diseases, (75) 703
  - miner's, should a man with, *work?* (20) 1109
  - produced by galvanism of individual semicircular canals (38) 943
  - sympathetic, in erysipelas, (68) 949

O

- OBESITY, electric treatment of, (71) **1036**
  - hypertrophy of parotid in, (78) **168**
- OBSESSIONS, phobias in relation to, (85) 406
- OBSTETRICIAN, physician as gyne*cologist and*, (134) 699
  - responsibilit*ies of*, and ultimate results of faulty technic, (142) 322
- OBSTETRICS: See also Labor
- OBSTETRICS, (109) 698, **1390**—ab
  - advancement of, (2) 396, (53) 552
  - anesthesia, (104) 161
  - cases, 200, deductions from and unusual cases, (95) 1108
  - early-day, among Indians, experiences in, *(137) 699*
  - ergot, application of *active* principles of, (122) 1038
  - expedients, serviceable, three, (62) 83
  - forceps, high, when is operation justifiable? (39) 1326
- OBSTETRICS, forceps, history of, (69) 1327
  - gynecology and, 1887-1912, (26) 323
  - in country, (79) 1743
  - modern, (108) 698
  - operations, conduct in acute chronic endocarditis, **1736**—ab
  - operations without consent of husband, liability for, **615**
  - paralysis and face presentation, connection between, (106) 1195
  - pelvis contraction, problems in, ***4**
  - pituitary extract in, (111) 406, (52) 557, (59) 791, *(94) 793*, (35) 866
  - roentgenotherapy in gynecology and, (93) **406**
  - rubber dilating bag, new, *(105)* **1263**
  - surgery, (80) 1580
  - teaching and practice, past, present and future, (137) 85
  - tetany in, (76) **1747**
  - treatment, radical and conservative methods in, (51) 1107
- OBSTIPATION, chronic, operative treatment, (59) 404
  - colonic dilatation, congenital and acquired, in, (118) 320
- OCCIPITO-POSTERIOR position, (53) 1326
- OCCUPATION in treatment of insane, (18) 1395
  - of parents and physical development of infant at birth, (178) **562**
  - tax, liability to, after exemption, **1323**—Ml
- OCCUPATIONAL DISEASES: See Industrial Diseases
- OCULISTS, specialists with particular reference to optometrists and, (99) 1835
- ODIN'S alleged discovery of cancer germ, **463**—P
- ODONTOID PROCESS of axis, fracture of, (97) 704
  - of axis, fracture of, with intermittent pressure paralysis, (32) 81
- OFFICE and residence, combined, for physician, **390**
  - business methods, (100) 698
- OHIO medical news, **60**, **456**, **529**, **758**, **842**, **1005**, **1165**, **1236**, **1371**, **1550**, **1648**, **1715**, **1803**, **1969**
  - state board December examination report, **1018**
  - state board January reciprocity report, **1179**
  - state board October reciprocity report, **1179**
- OIL, camphorated, subcutaneous injection of, (141) **330**
  - in abdomen surgery, (43) 166
  - injections into knee-joint by open incision method, **1917**—ab
  - injections into peritoneum, injury from, (104) **1404**
  - injections into ureter for ureter calculus, (78) 83
  - of chenopodium in ankylostomiasis, efficiency of, (131) **706**
  - of cloves and picric acid preparation of catgut, (157) 162
- OINTMENT in granulating wounds, treatment, (76) 1493
- OKLAHOMA medical news, **138**, **677**, **1550**, **1716**
  - state board April report, **1659**
  - state board January report, **854**
  - state board October report, **78**
- OLD Age: See Senility
- OLECRANON, fracture of patella and, subcutaneous suture of, (51) 701
- OLIVE OIL and lanolin, injection of, for removal of wrinkles, atrophy of optic nerve following, (83) 553
  - sterilization of, (86) **2072**
  - tablets, Edward's, **1378**—P
- OLSHAUSEN method of ventrosuspension, objection to, ***1701**
- OMAHA, Electro-Oxygen Institute of, **2060**—P
- OMENTUM, abscess in, after necrosis of pancreas, (139) 1750
  - *cuff for perforated stomach* and duodenum ulcer, (103) 1403
  - cysts, (25) 1185
  - for plastic operations in abdomen, *(96) 559*
  - great, functions of, (122) 1843
  - migration of, causes of, ***1292**
  - permeability of intestine wall for bacteria and protecting action of, (155) 1502
  - tumors, (66) 1840, (23) 2069
- ONYCHIA, diphtherial, and diphtheria of stomach, *(11)* **1837**
- OPEN-AIR schools, (21) *1980*
  - treatment, physiology of, (19) **1837**
  - window schoolrooms, (13) **1919**
- OPERATING-room for modern hospitals which provide for spectators, ***1847**
- OPERATING-room, illuminating, improved apparatus for, ***1846**
  - -table for rhinologists, ***1951**
- OPERATIONS, abdominal, postoperative and preliminary treatment, (36) 1579
  - advice to patients leaving hospital after, ***1133**
  - after-treatment of, **1249**—ab, (109) 1397
  - ascaris lumbricoides as complication of, ***1953**
  - blood-pressure before, during and after, under local and general anesthesia, **1737**—ab
  - complications following, (34) 1832
  - cosmetic, technic for, and treatment, (146) 1502
  - death rate from, means and meth*ods of reducing*, (87) *1494*
  - diet before and following, (88) **1500**
  - electric lights, focusing several, on field of, method, (17) 316
  - estimate patient's resisting power before attempting, (56) **1670**
  - exercises after, ***1202**
  - gynecologic, conduct of *pregnancy and labor and*, in acute and chronic affections of heart, **1737**—ab
  - joining causes of action for unauthorized and unskillful performance of, **1829**—Ml
  - management of patient before and after, **1299**—T
  - pain abolished after, with nerve block at a distance, (35) 1832
  - patients examined before, (48) 1926
  - plastic, cheek defect repaired by, (9) **1105**, (97) 1841
  - plastic, fascia lata for, (70) 1333
  - plastic, muscle flap to arrest hemorrhage from various sinuses of dura mater, (109) 1842
  - plastic, on esophagus, flap from stomach wall for, (118) 1038, (111) 1842
  - plastic, on muscles for face paralysis, (43) 1926
  - plastic, providing new outer covering for scrotum and penis, (73) 867
  - plastic, recent *progress in*, (77) 1927
  - preparation of field of, *symposium on*, (120) 1404
  - rectum and vagina, shelf for, ***1537**
  - suction hand-valve for clearing operative field, ***897**
  - sufficiency of consent to, before examination, measures of, damages, **1829**—Ml
  - technic, (23) 1740
- OPHTHALMIA electrica, (104) 1835
  - gonorrheal, gonococcus vaccines in, (48) 944
  - gonorrheal, infection with, tardy, (164) 562
  - migratory, followed by recovery of useful vision, (148) 243
  - neonatorum, administrative standards, (15) 860
  - neonatorum and blindness, (141) 478
  - neonatorum, bill for act entitled an act for prevention of, **2004**
  - neonatorum, control of, in Massachusetts, (15) **475**, **779**—ab
  - neonatorum in London, (12) 1982
  - neonatorum, non-gonorrheal, (84) 633
  - purulent, metastatic, (89) 1107
  - sympathetic, (112) 1667
  - sympathic, blood changes in, (31) 943
- OPHTHALMOLOGIST, eugenics from viewpoint of, (126) 699
  - training of, improved, (5) 1393
- OPHTHALMOLOGY, American Academy of Otology and, meeting of, **1006**
  - and general medicine, contact points between, (130) 1836
  - aseptic, antiseptic and prophylactic measures in, observations made in various British and continental hospitals, (16) 786
  - immunotherapy in otolaryngology and, (92) *1494*
  - International Congress on, ***606***
  - iodin in, advantages of, (55) ***1746***
  - local *anesthesia in*, (92) 242
  - notes on, (208) 874
  - postgraduate classes *in*, ***1168***
  - prospects and retrospects, (51) 1326
  - section of British Medical Association and Oxford Ophthalmologic Congress at Birmingham, impressions of, *(96)* 1397
  - teaching, in America, (135) 478
  - year's progress in, (34) 552

OPHTHALMOMETER forming a corneal microscope, accessory to, (5) 780
OPHTHALMOSCOPY in pregnancy, importance of, (24) 861
post-mortem, (45) 1579
OPIUM, action on defecation, mechanism of, (102) 328
addict, greater consideration for, plea for, (47) 862
evil a national responsibility, **1887—E**
fiend, (105) 1108
in pellagra, **1486**—ab
law and sale of, **298**
measures against, **1719**
pharmacologic study of, its elements and substitutes, (87) 1114
Russian move against, **1659**
use in children, (105) 1037
OÖPHORECTOMY: See Ovariotomy
OPSONIC index in plague vaccination, (26) **1745**
index, influence of hormones on, (71) 249
methods and tuberculosis, (37) **481**
OPSONINS, behavior of agglutinins and, in animals after castration or injection of extract of testicles, (141) 252
in puerperal infection, (150) **163**
OPTIC disk in purulent otitis, complications, (36) 1028
Nerve: See Nerve, Optic
OPTOMETRISTS, specialists with particular reference to oculists and, (99) 1835
OPTOMETRY and dentistry, (82) 553
and general practitioner, (140) 322
bill, why physicians should actively fight, (93) 161
ORA serrata, research on, (193) 488
ORANGE-ETHER anesthesia, essence of, (106) 1397
essence of, nitrous oxid gas and sequestration in general anesthesia for operations in upright position, (72) 1922
ORBIT, accessory sinus disease in relation to eye and, (94) 1923
cellulitis of, (71) 1493
foreign bodies in eye or, (133) 243, (86) 554
hematoma of left, modified Kronlein's operation for, (4) 945
steel passing through eyeball into, (142) 243
tumors, plea for operation, (3) 945
tumors, radiotherapy in, (69) 1396
ORCHITIS ascribed to strain, (101) 705
rheumatic, acute, ***1608**
ORDINANCE, valid, of board of health, **79—MI**
OREGON medical news, **676**, **1236**, **1550**
state board January report, **1385**
state board July report, **78**
ORGANIZATION, full, of medical profession, necessity for, **1249**—ab
medical, in England, **1657—ME**
public health, cooperation among, **1080—E**
ORGANOTHERAPY: See also Extracts
ORGANOTHERAPY, adrenal, (26) 1038
adrenal, in muscular debility, (48) **790**
experimental, (128) 1196
in dysmenorrhea, (78) 950
scientific basis of, (36) 866
to date, (139) 707
ORIENTAL SORE, vibrio in, (103) 1842
ORIGINAL package evil in advertising, **1317—P**
ORNITHODORUS moubata, resistance of, to various sheep-dips, (2) [illegible]
ORTHODIAGRAPH, persistent ductus botalli and diagnosis by, (11) 1258
ORTHODONTIA, (3) 940
breast-nursing and nose obstruction, **301**—ab
for nose obstruction, plea for early recognition and correction of faulty maxillary development, (107) 161
ORTHOPEDIC principles for use in general practice, (5) [illegible]
surgeon, crippled children in relation to community from standpoint of, (74) 477
surgery section, **65**
surgery, spontaneous gangrene and allied conditions in, (7) 859
table and fracture, ***1550**
treatment at right time, (22) 324
OS CALCIS: See Heel Bone
OS COXAE innominatum, left, complete detachment and dislocation of, in boy, (2) [illegible]
OSLER'S sign and certain skin phenomena sometimes associated with heart disease, (21) 1924
OSTEITIS and periostitis, (116) 1328
deformans, (99) 242, (63) 1666
post-typhoid, suppurative, 13 years after enteric fever, (14) 699
OSTEOARTHROPATHY, vertebral, (5) 859
OSTEOGENESIS imperfecta, (3) 550
OSTEOMA in front of hip-joint, (40) **947**
muscle degeneration and, (62) 398
superior maxilla, unusual case of, (34) 943
OSTEOMALACIA, (30) 787
and rachitis, etiology and treatment, (89) **1334**
metabolism in, (89) 868
symptomatology of rachitis and, in Japan, (66) 1193
OSTEOMYELITIS, (150) 1502
aberrant and recurrent, (22) 401
acute, (157) **243**
blood-borne, experimental research on, (78) 1840
bone transplantation in, ***2030**
digits, tuberculous, (16) **1919**
diffuse, from nasal sinus suppuration, (9) 479, (19) 865, (15) 1109
hemophilic arthritis simulating, (64) 1266
hemorrhagic, non-suppurative, chronic, (21) **625**
leukocyte count in tuberculosis of bones and, in children, diagnostic significance of, (19) **1492**
long bones, localized, (13) **1577**
seashore treatment of, (4) **1491**
spine, eight cases, (42) 86
OSTEOPATHS and death certificates in New York, **1717**
diploma, registration of, not enough, state need not prove practice by any system or method, **1257—MI**
one danger from, **920**—ab
OSTEOPATHY, legal status of, present, **1018—ME**
OSTEOSARCOMA: See Bones, Tumors
OSTEOTOMY, femur, lower end of, in permanent flexion of knee-joint, **1917**—ab
OSTWALD, International Institute of Chemistry proposed by, and opposed by chemical houses, **1229—E**
OTHYGROMA nephriticum, ***123**
OTITIS, encephalic infection in, paths of, (10) **629**
external, ichthyol and phenol in, ***742**
media, acute, afebrile sinus thrombosis and cerebellum abscess complicating, (87) 399
media, catarrhal, chronic, eustachian tube in relation to, (47) 782
media, chronic, eustachian tube in, (17) 81
media, catarrhal, non-suppurative, (79) 1834
media, myringotomy in, inadequacy of drainage obtained by, method of overcoming difficulty, (36) 943
media, prevention of, (102) 1189
media, suppurative, acute, (29) 1260
media, suppurative, mastoiditis complicating acute and chronic, significance of fever in, (15) 1537
media, syphilitic, (66) **791**
purulent, optic disk in, its complications, (36) 1028
OTOLARYNGOLOGIST and general surgeon, combination operations between, (64) 238
OTOLARYNGOLOGY, immuno-therapy in ophthalmology and, (92) 1494
year's progress in, (32) 552
OTOLOGY, American Academy of Ophthalmology and, meeting of, **1595**
from medical point of view, (73) 523
local anesthesia in, (72) 242
suction hyperemia in, (215) 1754
OTOSCLEROSIS, deafness due to, (100) 122
OUTDOOR life, purpose of, from patient's viewpoint, (51) 627
OUT-PATIENT Department: See Dispensary
OVARIOTOMY, Ephraim McDowell father of, his life and work, (35) 1765
grave of Jane Crawford, first subject of, **67—C**, **225—C**
selection of women for life insurance risks on whom hysterectomy and, have been performed, (52) 82
OVARY, abscess of fallopian tube and typhotuberculous, (86) **783**
appendicitis, chronic, and disease of, (41) **1331**
biology of, experimental, **1228—E**
calcareous fibroid, large, with absence of uterus ligaments and, (21) 695
cysts, differential diagnosis, (157) 708
cysts, etiology, pathology and treatment, relation to child-bearing, (128) 320
cysts, gelatinous, pseudomyxoma of peritoneum arising from perforation of, and associated with similar cystic disease of vermiform appendix, (34) 86
cysts, surgery for, conservative, disadvantages of, (42) 1926
cysts with twisted pedicle, (111) 1835
effects of secretion of corpus luteum and, (88) 328
fetus developing in, (29) **1669**
fibrosarcoma, primary, (28) 1264, (49) 1265
grafting, (149) 1406
hernia of fallopian tubes and, (98) 1500
inflammation of fallopian tubes and, treatment, (57) 791
influence as organ of internal secretion, (6) **1324**
influence on uterus and on general metabolism, (35) **1265**
lipins of corpus luteum and, (61) **319**
menstrual and intermenstrual passive congestion of uterus and, (46) 1746
operations on, conservative, 112 cases, (14) **396**
parotitis, epidemic, involvement of, ***359**
pseudomyxoma in peritoneum involving appendix and, (106) 1269
roentgenotherapy of, in exophthalmic goiter, (113) **1931**
sarcoma, in infant, (51) 1192
secretions of breast and, internal, interrelations between, (124) **706**
sterilization of women, temporary, by walling off, with broad ligament, (92) **1748**
teratoma, removed at age of 50, (55) 1332
tuberculosis of fallopian tube or, lesions of intestines with, (68) **1266**
tumors and pregnancy, **1373**
tumors, pregnancy and labor complicated by, (123) **321**
OVUM, feces examination for, (54) 948
retention of, (120) 705
sterility and abortion in relation to, (31) 462
tubal, earliest recorded, (14) **158**
OWEN BILL, (65) 553
new, **1308—E**
new, text of, **1320—ME**
printers favor, **212—E**
Senate declines to consider, **453—E**
OXALURIA, **1959—E**
and phosphaturia, alternating case of, (3, 4) 1329
of bacterial origin, (109) 1272
OXFORD Ophthalmologic Congress and ophthalmologic section of British Medical Association at Birmingham, impressions of, (96) 1397
OXIDATIONS, rate of, in unfertilized egg of sea urchin, (41) 1665
OXYDASE reaction, (100) 1588
reaction in differentiation of acute leukemias, (18) **1924**
reaction in placenta, (79) 950
OXYGEN, absorption of, by growing cultures of bacillus coli and bacillus welchii, (72) 161
as adjuvant in general anesthesia, (49) 1110
direct application of, in intestinal diseases, (162) **487**
in asphyxia in newborn infant, (100) **1195**
localization in animal tissues, (101) 1570
poor air in anemia, (123) **560**
subcutaneous injection in permanently [illegible]
OXY. [illegible]
OXYURIS, appendicitis in relation to, (137) 870, (71) 1188, (130) **1750**
OYSTERS, infection from, (48) 403
polluted, and typhoid, **916**
OZENA and atrophic rhinitis, treatment, successful, (93) 1922
modern treatment, (76) 558, (46) **1985**
ÓZONE as medicine, **1094**
chemical study of water and, (156) 1198
in gastro-intestinal tract, therapeutic action of, (64) 1035
in glycosuria, (54) **1332**, **1559**

P

PACIFIC coast, advertising specialists on, **1800—P**
PACKING, nose, efficient and easily removable, (58) 1028
PAGEL collection of books on history of medicine in Washington University Medical School, (100) 1835
PAGET'S Disease of Bones: See Osteitis Deformans
PAGET'S Disease of Nipples: See Nipples
PAIN, abdomen, in infants, (23) **1583**
abolishing, after operations with nerve block a distance, (35) 1832
in diagnosis of pelvic inflammatory conditions, (140) **1197**
in epigastrium, causes of, (200) **1754**
mechanics in relation to, (40) 160
PALFYN, Jan, (103) 320
PALM buds as food, (124) 1589
roentgenotherapy of diseases of, (9) 1982
PALMIN test, Ehrmann's, for pancreas functioning, **1487**—ab
PAMPHLETS issued by various organizations, value of, **543—ME**
public health, **1253—ME**
PANAMA Canal Zone: See Canal Zone
PAN-AMERICAN Medical Congress, **617**
PANCREAS, accessory, surgical significance of, (28) **1832**
calculi, (137) 1406
Cammidge reaction in diagnosis of disease of, (150) 92, (146) 1116, (141) 1270
cancer of liver or, (42) 631
contusion, (149) 707
cyst, **237**—ab, (18) 946, (110) 1404
cyst with acute symptoms, (19) 946
disease, (94) 1588
ferments of, in feces as aid in diagnosis of disease of, (204) 1754
ferments of, in infants in acute intestinal indigestion, (5) 1103
functional activity of, diagnosis by ferment analyses of duodenum contents and feces, (9) 1025
functioning, Ehrmann's palmin test for, **1487**—ab
functioning, Schmidt's nuclei test of, (142) **1117**
hemorrhage in, (123) 1501
influence on digestion and absorption of fats, (142) 252
intoxication from, (161) 872
Islands of Langerhans, importance of, (126) 1270
juice of, in epinephrin glycosuria, modification of, (145) 1262
juice of, no reflux of, into stomach of infant, (128) 1277
lipomatosis of, (40) 1741
liver and carbohydrate metabolism, (90) 1113
necrosis of, abscess in omentum sac after, (120) 1750
resection of, experimental, and pancreato-enterostomy, (75) 1927
trypsin-secreting capacity of, (162) 4-5
tuberculous cyst originating in, (125) **322**
PANCREATITIS, (23) 402, (63) 1266
acute, (131) 1660, (46) 1222, **1343**—ab
acute, diagnosis of, (117) 1250
acute, high intestine obstruction and postoperative ileus, (92) 1261
chronic, (133) **1750**
chronic, and pancreatic lymphangitis, ***1**
chronic and subacute, diagnosis and treatment, (71) **697**
chronic, management of, (74) 250
diabetes in acute [illegible], (47) **1192**
hemorrhagic, acute, (125) 481, (217) **564**
surgical treatment of cholelithiasis and, (122) [illegible]
PANCREATO-ENTEROSTOMY and resection of pancreas, experimental, (75) 1927

PANHYSTERECTOMY and cesarean section in elephantiasis of vulva, (14) 479
PANSINUSITIS, *bilateral, operation,* thrombosis, meningitis, recovery, (99) 1581
PANTOPON, action on defecation, mechanism of, (102) *328*
PAPAYAN'S Bell, **682**—P
PAPER, sensitized, for roentgenotherapy, (69) 1986
PAPILLOMA, epiglottis, large, removed by fulguration, (85) 399
  lip, lower, malignant, (108) **1668**
  or cancer of thyroid, (61) 1927
  vesical, high frequency cauterization in, value of, (19) 860
PARACASEIN and ash-free casein, method of preparing, (81) 1327
  molecules and molecular weights of casein and, valency of, (84) 1327
PARACASEINATES and basic calcium caseinate, preparation and composition of, *(82) 1327*
  and caseinates, unsaturated or acid, preparation and composition of, (83) 1327
PARACELSUS and history of medicine, **449**—E
PARAFFIN for wounds, (131) **91**
  liquid, sterilization of, (86) **2072**
  prosthesis and deformity of nose, (54) 1111
PARALDEHYD, anesthetic effects of intravenous injection of, (9) **316**
  poisoning, (57) **404**
  tetanus treated by intravenous injections of, and copious injections of normal salt, (27) 556
PARALYSIS agitans in negroes, ***43**
  and deformities following poliomyelitis, *treatment, (124) 1264*
  arm and shoulder, of poliomyelitis, (67) 1580
  birth, (31) 1745
  bladder, in poliomyelitis, (139) 330
  bulbar and pseudobulbar, (33) 324
  diaphragm after anesthesia of brachial plexus, (136) 1197
  diphtheritic, (36) 1034
  early, (87) 864
  early, correction in article on, **541**
  early, recognition, differential diagnosis and medicolegical considerations, ***352**
  extra-pyramidal, *(212)* **874**
  eye muscles in children, (160) **92**
  face, (97) **793**
  face, *from mastoid lesion,* (49) 324
  face, peripheral, (82) 558
  face, plastic operation on muscles for, (43) 1926
  face, postdiphtheric, recovery under antitoxin, *(97) 1195*
  focal symptoms in, (125) 1264
  following extension for fracture of femur, (72) **633**
  foot, osteoplastic fixation of, (104) 951
  gastro-intestinal, postoperative, (51) 862, (62) 1035
  general, abortive *forms of tabes* and, (91) **1930**
  general, and tabes, atypical forms of, considered in light of serodiagnosis, (71) 241
  general, blood-serum in, hemolytic properties of, (102) 1269
  general, diagnosis, early (33) 1496, (40) 1670
  general, etiology and early diagnosis, (56) 1742
  general, in children, (88) 558
  general, laboratory aids in diagnosis, (57) 1742
  general, of *insane,* (13) 1330, (110) 1397
  general, of insane, eye symptoms in, (20) **551**
  general, of *insane,* its prophylaxis and treatment, (19) 1744
  general, prophylaxis, (78) *1667*
  general, remissions in, statistical study of, (31) **1665**
  general, salvarsan in, ***429**
  general, symptomatology and clinical types in, (55) *1742*
  in dog simulating poliomyelitis, (28) 1578
  induced, of diaphragm, in lung disease, (124) **1405**
  Infantile: See also Poliomyelitis, Acute Anterior
  intermittent pressure, fracture of *odontoid* process of axis with, (32) 81
  ischemic, **617,** (104) 705, (65) 867
PARALYSIS, ischemic, and contracture, experimental research on, (127) 870
  juvenile, **1575**—ab
  Landry's, **1102**—ab
  Landry's, due to salvarsan intoxication, **1301**—ab
  leg, anatomic explanation of many cases of weak or painful backs and, (17) 475, (1) 859
  mirror writing and other associated movements without, (50) 1921
  muscles of leg, total, deformity from gravity, (58) 1746
  muscular, eccentric movements in treatment, (7) **786**
  nuclei, hypoglossal, (60) 1188
  obstetric, and face presentation, connection between, (106) 1195
  oculomotor, bilateral, from softening in each oculomotorius nucleus, **1910**—ab
  occulmotor, cyclic, (117) 1931
  periodic, (3) **1581**
  phrenic nerve after blocking brachial plexus, (156) **1675**
  progressive, etiology of, (83) **2072**
  progressive, nucleinic acid in, (129) 251
  progressive, treatment, (79) **1671**
  pupil, hemianopic, and hemiopic prism phenomenon, (32) 397
  quadriceps transplantation in, (34) **781**
  radial nerve, postoperative, prevention of, (36) 947
  recurrent nerve, due to circulatory lesions, recent therapeutic measures, (43) 862
  recurrent, with heart stenosis, (25) 2069
  residual, of poliomyelitis, *implantation* of silk tendons in, results *from, (2) 1491*
  respiratory, Meltzer's insufflation anesthesia in, during operations on brain, advantages of, (52) **1927**
  serodifferentiation of progressive dementia praecox and, (135) 560
  sixth nerve, anatomic predisposition to, as *complication of spinal* anesthesia, (158) 708
  spastic, Foerster operation for, **1917**—ab
  spastic, in children, treatment, *(103)* **1672**
  spastic, operative treatment, (150) 485
  spastic, rhizotomy and operation to reduce force of antagonistic muscles, (135) 1844
  spastic, Stoffel's method of operative treatment, (131) **485**
  spastic treatment, (3) 629
  spine, flaccid, which attacked Louis Pasteur in early maturity and similarity to attack of acute epidemic poliomyelitis, (64) 1922
  spirochaeta pallida in brain in general, (43) **626, 1002**—E, (61) **1188,** (28) 1583, (75) 1586, **1650**
  traumatic, isolated, of suprascapular nerve, (105) 869
  treatment, (73) 791
  urine retention in, strychnin in, (101) **794**
  vasomotor, late, due to epinephrin, *(5)* 785
  vocal cord, right, temporary, with sensory disturbance on left side of body, (68) **241**
PARAMELITENSIS fever, (15) 946
PARANOIA, *modern conceptions of,* (60) 627, (59) 1262
PARAPHENYLENDIAMIN in hair-dyes, untoward effects of, **229**
PARAPHRONIA, emotional, (88) 242
PARPHLEGIA in Hodgkin's disease, laminectomy and roentgenotherapy in, (141) 1329
  spastic, with cutaneous reflex of defense occurring in Pott's disease, ***269**
  spastic, with rhizotomy for pain and spasticity, ***981**
  subluxation of lumbosacral joint as cause of, (6) 1491
PARASITES, action and influence of, in body, (202) 564
  human, trichostrongylus *colubriformis, a,* (21) 1669
  in syphilis found by jelly method, (45) **243, *1225**
  intestinal, and diseases found in Guam, (155) *479*
  intestinal, in Costa Rico, (16) 1191
  intestinal, in tropical pathology, is importance of exaggerated? **1823**—ab
  intracellular, *developing* into spirochetes, (2) 243
PARASITES of cockroaches, cancer induced in rats by feeding with, (52) **948**
PARASYPHILIS, nervous system, early signs of tabes dorsalis and, (77) 1667
  nervous system, neosalvarsan in, **1818**—ab
  nervous system, rarer manifestations of, (11) **629**
  passing of, (43) 1579
PARATHYROID, (68) 167
  do they functionate in intrauterine *life? (84) 783*
PARATYPHOID, anatomy of, pathologic, (134) 1270
  and typhoid vaccination with live attenuated vaccines; mixed vac*cines, (19)* **1109**
  appendicitis, (53) 1670
  bacilli not producing gas, (106) 869
  cholecystitis, (49) **552**
  epidemic, bacteriology of, (28) **781**
  epidemic, traced to milk-supply, (136) 952
  infection, (79) 88, (70) **1671,** (12) 1923
  infection and appendicitis, (99) 1672
PARCEL post, reprints cannot be shipped by, **1095**
PARENCHYMATOUS organs, hemostasis in resection of, (151) 1502
PARENTS, age of, factor in heredity, **616**
  education for, (9) 780
  occupation of, and *physical* development of infant at birth, (178) **562**
PARESIS: See Paralysis, General
PARIS letter, **63, 140, 221, 298, 380, 459, 532, 679, 844, 917, 1009, 1087, 1166, 1239, 1311, 1373, 1472, 1552, 1650, 1719, 1805, 1895, 1970**
  Medical School, damages of four hundred dollars imposed on, **1895**
  medical schools, poverty of, **1239**
PARKS, national, (131) 1750
PAROTID, hypertrophy of, in obese, (78) **168**
  tumor in, (5) 1982
  tumor in, embryonal predisposition to, (66) 702
PAROTITIS and sterility, (119) 1589
  atrophy of testicles after, (145) **252**
  epidemic, ovary involved in, ***359**
  eye complications in, interesting case, (80) 1581
  recurring, (98) 1195
PARTNER, retiring, may sell his influence and good will, **623**—Ml
PARTURIENTS, creatinin and creatin *eliminated* from urine in, (71) 482
PARTURITION: See Labor
PASADYNE, **766**—P
PASSIFLORA incarnata, Daniel's concentrated tincture of, **766**—P
PASTEUR, Louis, flaccid spine paralysis which attacked, in early maturity and similarity to attack of acute epidemic poliomyelitis, (64) 1922
  treatment of hydrophobia, **1732**—ab
PASTEURIZATION, control of temperatures in, (15) 1184
  effect on bacteria in milk, **689**
  efficient, and bacteria which may survive it, **1462**—E
PATELLA, dislocation, recurring, familial, (62) 867
  dislocation, traumatic, (102) *1397*
  fracture in tabes, (32) **166**
  fracture of olecranon and, subcutaneous suture of, (51) 701
  fracture treatment, (64) 1193, (55) 1326
PATENT MEDICINE: See also Nostrums; Proprietary Medicines
PATENT MEDICINE, advertised, and physicians, **671**—E
  advertising, **134**—E, **144**—P
  and fallacious inductive reasoning, **674**—E
  and proprietaries in Italy, **1503**—ab
  and public health, **614**—ab
  attitude of drug journals toward, **837**—E
  council on, suggestion that one be appointed by American Pharmaceutical Association, **1547**—E
  man, solicitude of, **1466**—E
  proprietary *remedies and,* **379**
  select committee of, **1466**—E, **1477**—P
  sincerity of physician in advising concerning, **687**—P
  successful business and, **134**—E
PATENTED, can living tuberculosis bacilli be? (167) **487**
PATENTS and medical apparatus, **1239**
PATHOLOGY and bacteriology, year's progress in, (32) 552
  clinical literature on, recent, (31) 700
  diagnosis and treatment of borderline lesions, **2065**—ab
PATIENT, advice to, leaving hospital after surgical operations, ***1133**
  and physician, confidential communications between, (120) 242
  before and after operation, management of, **1299**—T
  compulsory admission into hospitals, **1807**
  examination before operation, (48) 1926
  relation of physician and, existed *and question of malpractice for* jury, **2064**—Ml
  resisting powers of, estimate before attempting operation, (56) **1670**
  wealthy, and professional fees, **909**—E
PAUL SEGOND foundation, **917**
PAVY and diabetes, **1159**—E
PEDIATRICIAN as dietetist, (140) 1030
PEDIATRICS, (127) 1030
  foundations of modern, (75) 1113
  mineral waters in, (97) 169
PEDICULI and *pigmented* areas on skin, connection between, (166) 1198
  capitis, method of rapidly exterminating, (25) **244**
PEKING Medical Conference, **1820**—ab
PELLAGRA, (68) 83, (130) 1030, (78) *1189, (122) 1328, (50) 1742*
  as public health problem, (53) **1742**
  blood findings in, (10) **1259**
  cholecystitis *as complication* of, (22) 475
  distribution in United States, **129**—E
  early and undeveloped cases, (145) 1329
  epidemology, **1089**—ab, ***1423, 1823**—ab
  etiology, **1485**—ab
  gastro-intestinal tract in, ***889**
  in Eastern Kentucky, (54) **1742**
  in Maine, recent work on etiology of disease, (13) 551
  in New York State, (104) 320
  in Pecos Valley, (54) 1580
  induced in monkey, (63) 944, ***1943**
  infectious-dietetic hypothesis of, **130**—E
  insanity and, (52) **1742**
  lesions resembling, experimental production of, (31) 1186
  metabolism in, (7) **1739, 1961**—E
  opium in, **1486**—ab
  prevention of, (67) 1327
  psychoses with, (31) **1492**
  specific treatment, (117) 1030
  stable fly, as one of possible factors in causation of, ***271**
  symptoms and diagnosis, (51) 1742
  treatment, (43) 240 (103) *399*
PELVIS abscess, drainage in pyosalpinx and, **1485**—ab
  abscess, grape seeds in, *(126) 1836*
  abscess, rectum section for, *in men,* (55) **1666**
  cellulitis, (75) 1327, (4) 1923
  cellulitis, *following* Wertheim's operation, (56) **247**
  contracted, *correction of,* (139) **637,** (133) **1337,** (83) **1672**
  contracted, labor with, (39) 2070
  contracted, moderate degrees of, their obstetric problems, ***4**
  contracted, unusual *forms of,* (68) 1193
  cyst, epidermoid, unusual *symptoms* with, (108) 951
  disease and psychiatry, (154) **1031,** (139) 1406
  examination in doubtful cases through vagina incision, (48) 1741
  fetal, development *of,* (176) 562
  fracture and dislocation of, (110) **170**
  inflammation, auto-inoculation in, (24) 556
  inflammatory diseases, old, massage for, ***966**
  injuries of floor of, due *to labor,* (13) **158**
  leukocyte count in suppurative con*ditions* in, prognostic value of, (86) **1397**
  ossification centers in fetus in, (173) *872*
  phlebitis of, operative *treatment,* (101) **90**
  slanting, mechanism of *development of,* (108) 1335
  vacuum capsules for applying heat *in chronic disease of,* (153) 708
PEMPHIGUS, malignant, intravenous *injection* of 20 c.c. *fresh human* serum in, (157) **1752**

PENAL code of Austria, new, and medical practice, **222**
  discipline and physical defects, (132) 699
PENIS, accessory passages in, and gonorrhea, (91) 1748
  fibrous or ossified plaques in, (111) **1404**
  ligation of, for lost power of erection, **1246**
  plastic operation providing new outer covering for scrotum and, (73) 867
PENNSYLVANIA medical news, **61, 138, 217, 295, 378, 457, 529, 677, 759, 842, 914, 1006, 1085, 1165, 1236, 1310, 1371, 1470, 1551, 1648, 1716, 1803, 1892, 1969**
PENTOSES, action of leukocytes on *some* hexoses and, (80) 1028
PEORIA conference on child welfare, 755—E
PEPSIN, ferment-arresting action of thiocyanic acid in respect to, (138) 252
  further research, (160) 1198
  quantitative determination of, by using colloidal suspension of egg albumin, (38) 1832
PEPTIDS, intoxication from methyl alcohol and, biochemical differential diagnosis *of*, (109) 869
PEPTONE, immunization against anticoagulating *action* of, research on, (32) 1330
  inhibiting influence of, on coagulation, (26) 946
PERCUSSION *and* auscultation, principles of, (26) 1109
  new *method of*, (124) 560
  resonant, (183) **1272**
PERICARDITIS, excrescences with, (162) 872
  incipient, early sign of, (58) 1332
  suppurative, temporary arrest of heart beats following incision of pericardium for, (10) 1104
PERICARDIUM, roentgenography of adhesion of, (50) 631
  temporary arrest of heart beats following incision of, for suppurative pericarditis, (10) 1104
PERICOLITIS, (1) **555**
  membranous, **1101**—ab
  membranous, and allied conditions of illeocecal region, (11) 1104
  membranous, mucous colitis and appendicitis, corelation of, **149**—ab
  mebranous, or Jackson's membrane, (61) 1107
  tuberculous colitis and, (71) **1671**
PERIGASTRITIS, lesions in stomach walls secondary to, (71) 1499
PERIMETER, electric, practical, (75) 1396
PERINEORRHAPHY with figure-of-eight suture, ***894**
PERINEUM, hemorrhage from, spontaneous, (127) 407
  protection and repair of, ***351**, (30) 1260, (18) 1324
PERIODONTAL disease, morbid anatomy of, (22) 1583
PERIOSTEUM, function of, ***983**
PERIOSTITIS and osteitis, (116) 1328
PERIPHERAL stasis, (27) **1838**
PERITONEUM, (83) 161
  access to spine through, (98) 869
  adhesions, (24) **1109**
  adhesions of insidious toxic group, (114) 1328
  flap, transplanted, (147) 707
  infections of, surgical treatment with reference to immediate sterilization of same, (138) 1030
  inflammation back of, (60) 702
  normal and pathologic physiology of, (79) 558
  oil injected into, *injury from*, (104) **1404**
  pseudomyxoma, (66) **248**
  pseudomyxoma, arising from perforation of gelatinous ovary cyst and associated with similar cystic disease of vermiform appendix, (34) 86
  pseudomyxoma, involving ovaries and appendix, (106) 1269
  surgery, (1) 162
  toxic action of urine in, (69) 249
  tuberculosis, general, *female sterility* as salient feature of, (15) 556, (43) **631**
PERITONITIS after laminaria dilatation, (93) 1841
  appendicular, *from bacteriologic* standpoint, (52) 166
  appendicular, treatment, (65) 791
  appendix changes in general infection and, (168) 488
PERITONITIS, bacillus coli communis infection causing fatal, ***1297**
  bile, (49) 1585
  bile, without perforation of biliary tract, (73) 249, (59) **325**
  diffuse and general, early diagnosis, (19) 1395
  ether in, **1971**
  general, cholecystitis, perforative, acute, complicated by, (83) 1396
  idiopathic, (7) 1831
  plastic, general, (101) 1262
  pneumococcus, secondary, with abscess *in spleen*, (116) 951
  postoperative, treatment, (68) **1499**
  suppurative, pointing at umbilicus, incision and cure in three cases, **1250**—ab
  treatment, tentative *research on*, (118) 705
  tuberculous, (91) 945
  tuberculous, chronic jaundice *from* old, (66) **1266**
  tuberculous, developing after labor, (70) 1113
  tuberculous, direct *sunlight* in, (53) 247, (27) 1191
  tuberculous, how does laparotomy cure? (17) **695**
  tuberculous, without effusion, (16) 2069
  uterus septus with hyperemesis, interruption of pregnancy at 3½ *months* followed by, (23) 695
PERMANGANATE, cholera treated by transfusion and, (67) **167**
  for *snake-bite*, (21) **323**
PERSON, plaintiff not allowed to show, unless injuries are visible, **1731**—Ml
PERSONALITY and outcome in 200 consecutive cases, (8) 1663
  integration and disintegration of, (9, 13) 1923
PERSPIRATION, absence of, unilateral, **1320**
PERTUSSIN, **766**—P
PERTUSSIS: See Whooping Cough
PESSARY, strangulation of anterior lip of uterus cervix by, (185) 563
PETROLATUM as substitute for Beck's paste, **1488**—ab
  in constipation, **1320**
  liquid, prescribing thymol in, **1814**
PETROLEUM fumes, irritation of eyes by, **69**
PETROMYZON dorsatus or larval land-locked petromyzon marinus, (39) 1260
PETROUS bone, extradural abscess at apex of, (24) 1583
PFEIFFER'S modification of Tsuchiya's *method* and Claudius' method for quantitative determination of albumin in urine, (85) 1671
PHAGOCYTES source of hemolysins, (47) 1034
PHAGOCYTOSIS of tuberculosis bacilli *in sputum, influence of iodid medication* on, (91) **1114**
PHARMACEUTICAL specialty house, effrontery of, in advertising, **380**
PHARMACIST, cooperation between physician and, through prescribing pharmacopeial and national *formulary* preparations, (11) 1577
  French statistics of physicians, midwires, dentists and, **917**
  physician and proprietary medicine, (12) 1577
  responsibility of, when prescription calls for heavy dose, **1319**
  what he thinks of sarsaparilla fetish, 1975—P
PHARMACOLOGY, research in, trend of thought in recent, (1) 2067, (9) 2068
  respiratory center, (53) **1922**
  snake's heart, (55) 1922
PHARMACOPEIA, useful, ***1427**, *1726—C*
  United States, proposed ninth decennial revision of, absurdities and commercialism of, **1913**—ab. ***2039**
PHARMACOTHERAPY, *pneumococcus* infections, (19, 26) 244
PHARYNGITIS, *pseudomembranous*, acute articular *rheumatism* consecutive to, (199) *1754*
PHARYNGOTOMY, *transverse*, access to tumors in nasopharynx by, (68) 483
PHARYNX, *currettage*, in adults, (25) 861
  diphtheria, atypical, ***1412**.
  infection by aspergillus niger, ***900**
  Leishmaniasis, Indian, (13) 946
  lymph ring, hypertrophy of, as cause in production of epilepsy, (93) 1494
PHARYNX, nasal, of child, cystic polypus in, (67) 1666
  phlebitis, (15) 1264
  tumor of mouth and, *malignant*, operative treatment, (21) **1583**, (36) 1669
  varices *in*, (146) 92
PHENOL and ichthyol in external otitis, ***742**
  coefficient, limitations in standardization of disinfectants, (32) 695
  crude, as larvicide, *experiments* in British *Guiana*, (31) 165
  in urine after use of phenolized gauze, (152) 252
  poisoning, physiologic *antidote* to, (48) 696
PHENOLPHTHALEIN as laxative and its general compatibility, **466**
  dose of 1.8 gm. did not hurt child, (100) 1037
  spectrum, (144) 707
PHENOLSULPHONEPHTHALEIN Test: See Test, Phenolsulphonephthalein
PHILADELPHIA, municipal charities of, **1082**—E
PHILIPPINE general hospital, anesthesia in, experiences in, (8) 1391
  general hospital, pathologic examinations *for year* from surgical *clinic of*, (105) 1581
  infantile beriberi in, (27) 1665
  physiologic activity of white men in, **1821**—ab
PHLEBITIS during course of uterus fibroma, (54) 701
  pelvis, operative treatment, (101) **90**
  pharynx, (15) 1264
  puerperal, citric acid to check coagulation in, (51) **403**
  puerperal, operable, (89) 89
  puerperal, operative treatment, general principles and results, (52) 557
PHLEGMON in small intestine, (64) 1402
  ligneous, of abdomen wall, ***1039**, **1318**—C
  on arm, technic for treatment, (147) **486**
  woody, cure of, under serotherapy, (104) 1195
PHLORHIZIN, influence on dogs with Eck's fistula, (77, 78) 1028
PHOBIA, hysteric, in children, treatment, (12) 1398
  obsessions in relation to, (85) 406
PHOSPHATES and indicanuria, (117) 698
PHOSPHATURIA and oxaluria, *alternating*, case of, (3, 4) 1329
PHOSPHORUS, action in *rachitis*, (84) 1671
  and calcium metabolism in two boys, (65) 2071
  and iodin contents, size and physiologic activity of fetus thyroid, (46) **1665**
  biologic importance of, (163) **1752**
  compounds of maize, effect of diplodia zeae and some other *fungi* on, (74) 1107
  compounds, organic, **1958**—E
  content of blood of normal *and* parathyroidectomized dogs, (43) 1665
  in epilepsy, (86) **1268**
  matches under *Hughes-Esch* bill, **850**
  metabolism and *tuberculosis*, (34) **481**
PHRENICOTOMY, *no scientific* basis for, (160) 1752
PHRENOCARDIA, (77) 1671, (86) **1987**
  diagnostic features of, (27) 1027
PHTHISIS: See *Tuberculosis*, Lung
PHYLACOGENS, (43) 160, **615**—C
  death due to *administration* of, ***588**
  do *untoward results* follow use of *Schafer's* vaccines or, **308**
  gonorrhea, *chronic*, treated with, (91) 319
  malpractice suits from use of, risk of, **465**—C
  menace to vaccine therapy, **602**—E
  misstatement *concerning*, **615**—C, **688**—C
  the personal animosity plea, **849**—P
  therapy, irrationality of, **523**—E
  warning *and protest*, **373**—E, **384**—P
PHYSICAL agents, *therapeutic*, few of, **1249**—ab
  development and moral *deficiency*, ***1351**
  education, *International* Congress of, **1167**
PHYSICAL insolvency, (20) 780
  measures, circulation disturbances *treated* by, **1553**
  therapy and psychotherapy, **926**—C
  therapy from modern point of view, (95) 629
  training in U. S. naval service, (148) 479
PHYSICIAN: See also Medicine, Practice of; Profession, Medical
PHYSICIANS, American, in dangerous posts, **130**—E
  American Society for Physicians' Study Travels, **66**—C, ***457, 1095, 1372, 1560, 1717**
  American Surgeons and, Congress of, meeting in Washington, **1311**
  and his money easily parted, **929**—ME
  and medical matters in recent novels and plays, (128) 1501
  and patient in prevention of malpractice suits, (91) 1103
  as obstetrician and gynecologist, (134) 699
  as public servant, (62) 1493
  attending, failure to call as witnesses, **396**—Ml
  attending, opinions on insanity, restricts to, **545**
  confidential communications between patient and, (120) 242
  consulting a, not an illness, **544**—Ml
  conviction of, for Roentgen-ray injuries, **533**
  cooperation between pharmacist and, through prescribing phatmacopeial and national formulary preparations, (11) 1577
  cooperation of, and election of physicians to state legislature, **538**—C
  credulity of, and nostrums, **1472**
  damages against, *for visiting* patient *without her consent*, **1893**
  deaths abroad, **219, 844**
  deaths in 1912, **54**—E
  distribution in Paris, **844**
  duty of, in education, (28) 2067
  duty to each other or medical ethics, (23) 1395
  duty to prevent infection, **310**
  epidemics and wholesale poisonings in relation to, (121) 329
  family, and insane [illegible]ent, (92) 1108
  foreign, fear of competition of, in France, **1553**
  French statistics of *pharmacists*, midwives, *dentists and*, **917**
  future of, (123) 242
  future of, in relation to advances in public hygiene, **152**—ab
  future of, in relation to national medical insurance, **153**—ab
  general, observations of, *on entering* institutional work, (151) 1030
  general, value of *special training in lung diseases* to, **1317**—C
  healthfulness of country and yet a field *for young*, **1238**—E
  home in Marienbad for diseased, **460**
  how many graduate, qualify and die annually? **852**
  impersonation of dead, **1087**
  in Austria in 1912, *number* and distribution of, **1374**
  in Germany in 1912, **381**
  in Indian service, **454**—E, **458**
  in public affairs, **1388**—ab
  in times of peril, **1080**—E
  infant welfare work *and*, (48) 1746
  insurance company asking support of, **1656**
  itinerant, validity and construction of provisions relative to, **1100**—Ml
  keeping up to date, **520**—E
  legal questions affecting, (123) 484
  licensing of, up-hill *fight* for better laws, **911**—E
  manufacturers *attempt* to lower standing of, **609**
  medicolegal relations of patient and, **1178**—Ml
  mutual aid society for wives *and* children of, **1806**
  national medical insurance as affecting future of, (124) 242
  needed in mountains of North Carolina, **1479**—C
  of to-day, (70) 1834
  office and residence, combined, for, **390**
  office business methods, (109) 638
  patent medicines and, **671**—E
  pharmacist *and* proprietary medicine, (12) **1577**
  picked out for easy mark, **600**—E
  preventive medicine and, (31) 1950

PHYSICIANS, proportion of, to population, **388**
public health and, (56) 1834
recent advances and aids for, (62) 1107
relation he should sustain to city clinic, (44) 944
relation of physician and, existed and question of malpractice for jury, **2064**—Ml
responsibility of, **1166**
rewards for professional courage, **1167**
selection of, and services recoverable for in injury case, **313**—Ml
shortcomings of, (107) 1108
social legislation and, (57) 1107
specialist in relation to, (23) 780
state-supported, in small towns, **1089**
telephone exchange, **1162**—E
true, (22) 780
vacation, (20) 1919
PHYSICS, laws of, as they affect vital processes and disease, (143) 408
PHYSIOLOGIC therapeutics, (93) 242
PHYSIOLOGY at Harvard medical school, 1870-1871, (32) 239
experimental value to community, **454**—ab
in medical examinations, **609**
PHYSIOPATHOLOGY of adrenals, (139) 1338
PHYSIOTHERAPY Congress, International, **219**, **1650**, **1720**
PIA MATER, cerebral, punctiform hemorrhagic pigmentation of, (24) 1395
glioma of, diffuse, (1) 1663
PICTURES, Moving: See Cinematograph
PICTURES of American Medical Association officers, **1889**—E
PIESER-LIVINGSTON gluten flour, **923**—P
PIG, fetal, brain of albino rat at birth compared with that of, (90) 1327
MENTATION, hemorrhagic, punctiform, of cerebral pia mater, (24) 1395
OCARPIN, atropin or epinephrin tests for autonomic nervous system in children, (121) 1931
embedded in bronchus, extraction of, (51) 1746
NEAL GLAND, functions of, (64) **1666**
umor, (134) 1590, (46) **1839**
umor, abnormal sexual development in infant probably due to, (25) 1260
PETS, apparatus for filling, new, ***663**
PITUITARY BODY: See Hypophysis Cerebri
PITUITARY EXTRACT and epinephrin in therapeutics, (135) 1406
diuretic action of, (116) 1589
in obstetrics, (111) 406, (51) 557, (35) 866, (59) 791, (94) 793, (90) 945
in surgical shock, (35) 1740
in uterus inertia, **1733**—ab
metabolism under, (99) 1749
retards labor, (139) 1197
spinal injections of, (184) 488
where to obtain preparations of, **309**
PITUITARY liquid, **1957**
PITUITRIN diuresis and vascular conditions, (56) 1922
rupture of uterus under, (79) **2072**
PITYRIASIS rosea, clinical manifestations of, (161) 479
PLACENTA, angioma of, (95) 328
cause of certain anomalies in, (72) 482
delivery of membranes and, (78) 1107
estimation of duration of pregnancy from histologic findings in, (190) 873, (154) 1271
low implantation of, (52) 403
oxydase reaction in, (79) 950
praevia, (148) 1030
praevia, anatomic bases for, treatment, (63) **1840**
praevia, central, abdominal cesarean section in eclampsia and, (64) **944**, (33) 1187
praevia, cesarean section for, (16) 556, (20) 1185, (86) 1834
praevia, etiology, (134) 330
praevia, mechanism and treatment, (6) **158**
praevia, prophylaxis, (117) **1115**
praevia, treatment, (63) 1402
retained, of extra-uterine pregnancy, (24) 1191
tumors, (42) **1331**
PLAGUE and cholera germs, action of ultraviolet rays on, (140) 1338
bacilli, attempt to separate antigen from nucleoprotein of, by filtration through gelatin, (21) 1744
PLAGUE bacilli, avirulent, mixed with agar, immunization of guinea--pigs by vaccination with, (110) 84
bacilli, infection of guinea-pigs, monkeys and rats with doses of, ranging from one bacillus upward, (111) **84**
bacilli, inoculated into body cavity, susceptibility of cockroaches to, (113) 1836
bacteriology, (106) 84
clinical observations, (105) 84
diagnosis, (124) **1030**
eradication in Porto Rico, ***1527**
immunity, mechanism of, (24) **1745**
in Manila, ***2042**
in sixth century, (137) 1674
investigation in India, **1872**, (20) 1744
-like organism from rat, (31) 695
nucleoprotein, immunity consequent on inoculation of, onset and duration of, (25) 1744
pathology, (107) **85**
pneumonic, and plague immunization, (101, 112) **84**
pneumonic, efficacy of various masks for protection against, experiments to determine, (112) **85**
pneumonic, in Brazil, (93) **249**
pneumonic, influence of atmospheric temperature on spread of, (103) **84**
pneumonic, method of transmission of infection in, (102) **84**
pneumonic, protective inoculation against, (109) **85**
pneumonic, susceptibility of animals to, (108) 84
pneumonic, transmission of, work of Strong and Teague, **130**—E
prophylaxis of, (125) 1030
pseudotubercle and, relationship as evidenced by vaccination experiments, (23) **1744**
septicemic, primary and pneumonic, portal of entry of infection and method of development of lesions in, (104) 84
serums, antitoxic, preparation of, (27) **1745**
symptoms and clinical diagnosis, (123) **1030**
vaccination, opsonic index in, (26) **1745**
PLAINTIFF not allowed to show person unless injuries are visible, **1731**—Ml
PLANT nutriments converted into human foodstuffs by animals, **904**—E
tissues, diastase and starch of, (49) 318
PLASMA, action of serum and, on certain objects used in biological test for epinephrin, comparison, (35) **626**
cells in kidneys, (125) 1270
oxalated, coagulation of, with cases of purpura, experimental observations on, (21) 1259
studies, **473**—ab
PLASMOGENESIS, research on, (160) 708
PLASTER-OF-PARIS as surgical dressing, uses of, (88) 1494
casts, (84) 1029
in mechanical treatment of tuberculosis of spine, (42) 480
-jackets, corrective, for scoliosis, (60) 1580
splint, ***1620**
PLATO, views of Freud and, on etiology and treatment of hysteria, (15) 1577
PLAYGROUNDS, value to community, (101) 1923
PLAYS, physician and medical matters in recent novels and, (128) 1501
PLETHORA, polycythemia with, and splenomegaly, (16) 1399
PLEURA, absorption by, (130) **1337**
boring rib to drain effusion in, (106) **484**
diseases of, (21) 86
effusions in, complete removal by regulation of intrathoracic pressure during aspiration, (27) **323**
effusions in, due to artificial pneumothorax, ***494**, (113) 951
empyema in, bilateral, opening chest on both sides for, successful, (98) 793
infections of lungs and, acute, etiology, diagnosis and treatment, (54) 1666
injuries to lungs and, (65) 1834
reaction in, to tuberculin, (141) 408
sarcomas, (169) 872
PLEURA, traumatic extravasation of blood in joints and, behavior of, (145) 561
tumor, malignant, primary, clinical and pathologic report of case, (5) **694**
PLEURISY, (146) 638, (111) 1263
acute, prognosis in, **121**—ab
adhesions after, active respiratory exercises to ward off, (96) **1930**
adhesions following disturbances from, (135) **1196**
mechanotherapy in acute, (40) 1746
pulsating effusion with, (149) 1198
serofibrinous, autoserotherapy in, ***962**
spinalis muscle sign of, (17) **2069**
tubercle in relation to, (31) 86
PLEUROPNEUMONIA, contagious, muscle changes from intermuscular injection of calves with virus of, (114) 1836
PLUTO concentrated spring water, **1013**—P
PNEUMATURIA and apparent subsidence of glycosuria in diabetes mellitus with bladder disease, (149) 1674
PNEUMOBACILLUS, sero-agglutination of, (78) 1499
PNEUMOCOCCUS abscess of lung in children, (25) 1583
action on blood, (30) 1578
changes from passage through animals, negative results of research on, (28) 1926
do not proliferate in blood in pneumonia, (25) 1926
for puerperal infection, importance of, (177) 873
infection, associated, (66) **1747**
infections, chemotherapy of, **447**—E
infections, combined drug and serotherapy in experimental, (125) 1116
infections of lungs in children, chronic, (4) 2067
infections of throat, three fatal cases, (25) 1399
infections, pharmacotherapy of, (19, 26) 244
infections, serodiagnosis of, (197) 1754
meningitis with normal cerebrospinal fluid, ***972**
non-virulent, pneumonia lesions made by intrabronchial insufflation of, (29) **942**
peritonitis, secondary, with abscess in spleen, (116) 951
sepsis from gall-bladder calculus, (118) **1115**
vaccine, **665**, **1074**, **1461**
virulent, killed, reaction of lungs to intrabronchial insufflation of plain sterile bouillon and, (42) **1261**
PNEUMONIA, (45) 552, (123) 1328, (31) 1740
acute, during treatment with arsenic, (10) **865**
brachial-plexus neuritis and polyneuritis following, (91) **704**
camphor in, (98) **1672**
camphor, intravenous injection of saturated solution of, benefit from, (122) 1501
catarrhal, (123) 1328
diagnosis of appendicitis and, differential, (86) 1189
experimental, **389**
experimental, in rabbits, (17, 18) **2067**
fulminating, four cases from public institution, (22) **1925**
giant-cell, (9) **1979**
heart in, **996**—T
herpes zoster complicating bronchitis or, (147) 1502
in Brazil, (180) 488
in children, (44) 1265, (36) **1926**
in measles, (126) **1405**
influenzal meningitis complicated by, recovery, (73) 1922, **1915**—ab
initial chill and acute congestion in, cause of, **389**
inorganic metabolism in, special reference to calcium and magnesium, (52) **241**
lesions made by intrabronchial insufflation of non-virulent pneumococci, (29) **942**
lobar, acute, (126) 478
lobar, blood and sputum in, (111) 1030
lobar, cultures from sputum and blood in, (22) **941**
lobar, differential diagnosis, (62) 1262
PNEUMONIA, lobar, pulse-rate with blood-pressure in, value of studying (103) 1397
lobar, treatment, (107) 698
open-air sanatoria and, (94) 84
open-air treatment, (79) 783
paralysis of bladder and sudden death in, (67) 1746
pneumococci do not proliferate in blood in, (25) 1926
prevention, **836**—E
quinin in lobar and lobular, improvements in, **1914**—ab
salicylic acid applied to thorax in, (107) **794**
serotherapy, (4) **80**
treatment, (69) 83, (132) 1328, **1731**—ab
tuberculous, acute, recovery, (18) 1583
PNEUMONOTOMY for foreign body, (19) 479
PNEUMOTHORAX, artificial, (38) 556, (64) 1586, (63, 64) 1107
artificial, embolism during, fatal, (69) **632**
artificial, in lung tuberculosis, (49, 54) 82, (41) 166, (21) **244**, (35) 480, (112) 483, **532**, (62) 627, (60) **696**, (55) **949**, **1167**, (57) 1266, (49) 1401, (43) **1497**, (72) 1671
artificial, in lung tuberculosis, Forlanini method for, (34) 239
artificial, in tuberculosis by injection of nitrogen, (55) **88**
artificial, influence on mechanism of respiration in children, (103) 1335
artificial, necropsy after, (49) **948**, (47) **1584**
artificial, pleural effusion due to, ***494**, (113) 951
artificial, production of, and gas embolism, (122) **1836**
artificial, technic, (155) 486, (46) 1584
artificial, therapeutic, manometer for, (157) 1198
operative, technic for avoiding, (50) 403
spontaneous, after induced pneumothorax, (42) 2070
POISONING, alcohol, chronic, cirrhosis of liver after, experimental, (132) 560
arsenic, after salvarsan, (137) 485
arsenic, during treatment of syphilis, (90) 406
arsenic, evidences of, **1710**—E, **1901**—C
arsenic, from wall paint, (118) **1931**
atropin, mental symptoms in, duration of, (33) 1028
botulismus, (129) 706
brass, industrial, brass founder's ague, (9) 1738
camphor, (149) **330**
cantharidin, experimental, kidney lesion of, (25) 1578
carbon monoxid, ***737**
carbon monoxid, cause of anemia in city infants, (67) **1112**
carbon monoxid, of woman eight months pregnant and of fetus, (56) 1111
cocain, (24) 401
colocynth, (15) 2068
from pudding, (97) 1037
"Hell-oil" nuts, (144) 1502
label, needed amendment, **1547**—E.
lead, acute, (68) 1586
lead, and spinal cord disease, (72) **949**
lead, chronic, with multiple aneurysm, case of, (16) 1668
lead, from drinking-water, chronic, (48) 1107
lead, household, **1239**
lead, in storage battery works, prophylaxis of, (98) 1841
lead, in workers on brass, (116) **1269**
lead, Wassermann reaction in, (10) 1668
lithium, ***722**
manganese, ***646**
mercury, acute nephritis from operative treatment, experimenta research on, (71) 867
mercury bichlorid, **2061**
mercury bichlorid, by antisepti tablets, **1727**—C
methyl-alcohol, articles on, **1247**
methyl-alcohol, cases of, **1479**—C
mushroom, **1134**—T
mushroom, by inhalation, (11 **1336**
naphthalin, (100) 635
nitrobenzol, (195) 1754
non-corrosive, by mouth, epin phrin in emergency treatment, (785

POISONING, oak, experimental study, (18) 1739
  paraldehyd, (57) **404**
  phenol, physiologic antidote to, (48) 696
  sodium nitrite, (150) 330
  sulphur dioxid fumes, **1246**
  tobacco, fatal case, (20) **941**
  wholesale, physician in epidemics and, (121) 329
POLARIMETER test of liver functioning, (144) **638**
POLARISCOPE findings in cataracts, (77) 1586
  microscopic examination of feces with, (51) 1497
POLICE and health departments, co-operation between, need for more general, (13) 1492
  power of state and practice of medicine, **777**—ab
  training for, in medicolegal matters in their line of work, (133) 952
POLIOMYELITIS, acute anterior, (33) 317, (57) 863, (29) **2067**, (52) **2070**
  acute anterior, aborted forms and preparalytic stage of, observed in Buffalo epidemic, (49) **1921**
  acute anterior, deformities following, causation and treatment, (16) 1744
  acute anterior, diagnosis, (86) 406
  acute anterior, due to bite of dog infected with rabies, (137) 1329
  acute anterior, early stages of, (94) **406**
  acute anterior, etiology of, (117) **636**
  acute anterior, in California, (21) 1919
  acute anterior, in Norway, (103) **1037**
  acute anterior, in Switzerland, (114) **91**
  acute anterior, incubation period with, (85) **1268**
  acute anterior, neglected, **1917**—ab
  acute anterior, prognosis in, **1575**—ab
  acute anterior, transmission by fomites and flies, (105) **635**
  acute anterior, work of Massachusetts state board of health in investigation of, (13) 475
  anterior, intra-articular silk ligaments in paralytic joints of, (1) **1491**
  carrier of, in nose secretion, four months after acute stage of second attack of poliomyelitis, ***1611**
  cultivation of virus of, ***362**
  epidemiology of, (6) 1184
  experience with, as health officer for Parish of Morehouse during 1911, (82) 1667
  in guinea-pigs, ***982**
  insects and, **55**—E
  meningitis and, analogy between, **1380**—ab
  paralysis and deformities following treatment, (124) 1264
  paralysis in dog simulating, (28) 1578
  paralysis of arm and shoulder, (67) 1580
  paralysis of bladder in, (139) 330
  paralysis, residual, of, implantation of silk tendons in, results from, (2) 1491
  paralytic type of rabies and, **146**—C
  preparalytic symptom of, new, ***813**
  transmission by stable-fly, (38) 86
  transmission experiments with virus of, ***1611**
  transmission, mode of, ***1612**
  transmission to monkeys of virus from English cases of, (17) **946**
  variola and, (125) 1328
  virus of, demonstrated in throat of healthy persons, ***201**
  vital statistics law in Kentucky and, **56**—E
POLYARTHRITIS, chronic with enlargement of spleen and fever in children, (84) 406
POLYCYTHEMIA: See also Erythremia
POLYCYTHEMIA, (20) 1495
  chronic, (16) 1399
  or erythremia with chronic cyanosis and splenomegaly, (23) 158
  secondary, and heart disease, (55) **1497**
  secondary, in heart and lung cases, prognostic significance of, (25) 1837
  venesection in, advantages of, (128) 1116
POLYCYTHEMIA with plethora and splenomegaly, (16) 1399
POLYGRAPH in heart disease, (8) 1108
POLYMORPH neutrophil leukocytes, qualitative and quantitative effect on, with tuberculin in tuberculosis, (8) **555**
POLYNEURITIS and brachial-plexus neuritis following pneumonia, (91) **704**
  delirium due to, Korsakoff's psychosis, (9) 1663
  from pregnancy auto-intoxication, (204) 564
  of birds, dietary factors in, **1543**—E
  of legs following tubal abortion and local ischemia in legs, (54) **1266**
POLYPS, bleeding, in rectum, (34) **1583**
  cystic, in nasal pharynx of child, (67) 1666
  growth in cystitis, (91) 483
  rectum or sigmoid flexure, (113) 1335
  mucous, uterus, large mass of, with myomata, (20) 556
  urethra, persistence of chronic gonorrhea explained by, (63) 1671
POLYURIA, chlorids in simple, elimination of, and influence of sodium bicarbonate, (58) 1402
  chronic, cause of, ***1884**—E
  in diabetes insipidus, mechanism of, (179) 1753
  induced, (97) **90**
  with subacute nephritis, experimental, (86) 1402
PONCET'S inflammatory tuberculosis, (42) **1584**
POPULATION, effect of size of, on rate of selection of new bacterial races, experiment to illustrate, (25) 401
  of Ireland, **1894**
POROCEPHALIASIS in man, (17) 244, (26) 1400
PORPHYRINS in pathology, **998**—E
PORTER'S method of correcting faulty position of fetus head, (203) 874
POSITION, abrupt change of, during febrile diseases, dangers of, (131) **1038**
  after delivery, (64) **1112**
  dorsal decubitus after birth of head, necessity for, (123) 1038
  effect of change of, without active muscular exertion, on arterial and venous blood-pressures, (2) **1979**
POSOLOGY, **383**—ab
POSTGRADUATE classes in ophthalmology, **1168**
  instruction, problem of, (12) 860
  study abroad, **1175, 1727**
  teaching, international conference on, **458**
  work in our city clinics, (44) 944
  work in Vienna, (71) 1262
POST-INTELLIGENCER rejects fraudulent medical advertising, **1810**—P
POST MORTEM: See Necropsy
POSTOPERATIVE CARE: See Operation
POSTPARTUM and antepartum hemorrhages, (33) 1579
POSTURE, man's, its evolution and diseases, (47, 52) 1265
POTASSIUM and sodium in living tissues, (42) 866
  chlorid, salt perfusion of respiratory center in frogs and effect of calcium chlorid and, (57) 1922
  citrate and aspirin, compatibility of, **390**
  iodid in urine, test for, original, ***1621**
POTATO, nutrient possibilities of, **128**—E
POTTER'S walnut juice hair stain, **229**—C
POTT'S DISEASE: See Spine
POUCH of Douglas, abscess in, (116) 483
PRACTICE, contract, conflicts in regard to, **300**
  contract, in England under insurance act, (63) 1028
  contract, in new South Wales, (9) 1668
  contract, proprietary medicinal articles and their substitutes in, (70) 949
  of Medicine: See Medicine, Practice of
PRAYER treatment by Hindu, unlawful practice of medicine, **622**—Ml
PRECANCEROUS lesions, (85) 242
PRECIPITIN reaction, colloidal protection in certain phases of, possible importance of, (40) 1260
PREGNANCY, albuminuria in, remote prognosis of, (36) **246**
  albuminuria likely to recur in successive, (1) **1831**
  albuminuria, signification of, determining, (17) **1983**
  ammonia coefficient in, (11) 1831
  antitrypsin content of blood with cancer and, (174) 562
  appendicitis during, (10) 1831
  auto-intoxication, polyneuritis from, (204) 564
  blood-pressure, high, in, (35) **245**
  blood-test for, **309**
  breast secretion independent of, (10) 164
  cancer of uterus in, (89) 697
  carbon monoxid poisoning of woman eight months pregnant, and of fetus, (56) **1111**
  care of breast during lactation and, (102) 1029
  changes in adrenals after castration and in, (71) 1747
  cholelithiasis and cholecystitis associated with, (28) **1665**
  corpus luteum and, (47) 1985
  dermatitis, serotherapy of, (33) **2069**
  diabetes mellitus and, treatment, **1913**—ab
  disturbances of carbohydrate metabolism in eclampsia and, (105) **1269**
  double uterus, bladder, vagina and vulva with successive full time, (11) **946**
  duration of, estimation of, from histologic findings in placenta, (190) 873, (154) 1271
  electrocardiogram during, (144) 1406
  extrachorial, (95) 559
  extra-uterine, (141) 162, (87, 90) 319, (29, 32) 1496
  extra-uterine and intra-uterine, combined, **1480**
  extra-uterine, at term with normal child, (86) **89, 151**—ab
  extra-uterine, attempts to induce abortion in, (154) 92
  extra-uterine, diagnosis, (4) 396, (75) 553, (12) 694
  extra-uterine, diagnosis and treatment, (82) 1189, (102) **1842**
  extra-uterine, earliest recorded tubal ovum, (14) **158**
  extra-uterine, etiology, (52) 160
  extra-uterine, five patients operated on second time for, (80) 553
  extra-uterine, influence on blood-supply of uterus, **1786**—ab
  extra-uterine, interstitial, (155) 1271
  extra-uterine, management of grave emergency cases of, (27) **81**
  extra-uterine, multiple and bilateral, ***1766**
  extra-uterine, operation three months after term, recovery, (8) 1324
  extra-uterine or tubal, (113) 320
  extra-uterine, ovarian, (74) 482, (171) 562, (29) **1669**
  extra-uterine, ovarian, histologic study of, (36) 1496
  extra-uterine, ovarian, primary, ruptured very early, (14) 1330
  extra-uterine, ovarian, with full-time fetus, (24) 1033
  extra-uterine, retained placenta of, (24) 1191
  extra-uterine, ruptured sac in, (121) 242
  extra-uterine, tubal, (50) 1493, (10) 1577
  extra-uterine, tubal, diagnosis, (80) 950
  extra-uterine, tubal, double, (67) 696
  extra-uterine, tubal, recurring, (82) 950, (148) 1751
  extra-uterine, tubal, ruptured, transfusion in, (13) 860
  extra-uterine, tubal, with serious symptoms without rupture, (9) **786**
  extra-uterine, twice in same patient, (3) 1668
  eye symptoms in albuminuria of, important, (53) 160
  fallopian tubes, ligation of, followed by, **1484**—ab
  fallopian tubes, one ovary and greater part of other removed and followed by, (53) 477
  future, danger in, another argument in favor of nephrectomy for unilateral tuberculosis of kidney, (37) **1496**
PREGNANCY, gastro-intestinal diseases complicating, (135) 699
  gynecologic operations during labor and, in acute and chronic affections of heart, **1737**—ab
  hydronephrosis, acute, (6) 1264
  hypothesis cerebri after castration and during, in women and animals, (73) 482
  immunology of, (21) 1033
  in adenomyoma of uterus, (121) 320
  in diabetes, (69) 319
  in diverticulum of uterus, (94) 328
  in uterus with myoma size of adult's head, (89) 169
  interstitial, (88) 629
  irritability of neuromuscular system in, (151) **1752**
  malaria, complicating, (78) 88
  ophthalmoscope in, importance of, (24) 861
  ovary tumors complicating labor and, (123) **321, 1373**
  Piccoli operation for puerperal inversion of uterus, followed by, (113) **1588**
  Prochownick's diet in, **617, 928**
  prolonged, relation to some cerebrum lesions and feeblemindedness, (15) 158
  protein metabolism of normal puerperium and, (126) **321**
  pyelitis, serology of, (70) 1747
  rupture of amniotic sac at seventh month of, continuing to term, (85) 868
  salvarsan and neosalvarsan for women during, (55) 1111, (43) **1331**
  salvarsan for syphilis in women during, **679**, (53) 1111
  serodiagnosis, (180) **562**, (87) 868, (87) **950**, (107) **951**, (131) 1116, (88) **1396**, (69, 86) **1586**, (193) **1754**, (56) **1839**, (91) 1841, (114) 1931, ***1947**
  serodiagnosis, dialysis technic for, unreliability of, (111) 1335
  serodiagnosis, history of, (74) 1586
  simulating extra-uterine fetation of pus-tube, (12) 158
  striae formation during, factors in, **1735**—ab
  sugar in urine during, significance and treatment, (25) 86
  syncytial cells evidence of, **540**
  syphilis in, incomplete forms of, (39) 1584
  syphilis in, treatment, (34) **788**
  toxemia, (1, 2) **1031, 1227**—T, (17) 1324
  toxemia, excretion of amylolytic ferments in urine during, (30) **1745**
  toxemia, fulminant, (9) 322
  toxemia, new method of treating, (107) **320**
  toxemia, with convulsions, treatment, conservative, (45) 1028
  toxicosis, injection of Ringer's solution for, (80) **793**
  tuberculosis and, (50) **948**, (115) **1115**, (13) 1324, (83) 1494
  twin, in double uterus, (34) 1492
  urinalysis in, significance of, (29) 1740
  uterus fibroids complicating, (74) 553
  uterus myfibromata with, (143) 322
  uterus septus with hyperemesis, interruption of, at 3½ months followed by peritonitis, (23) 695
  uterus, spontaneous rupture of, at third month of, (166) 562
  viscosity of blood in relation to arterial tension during puerperium and, (88) 89
  vomiting, (140) **637**
  vomiting, pernicious, (11) 164, (12) 479, (18) 556
  vomiting, uncontrollable, and uterus retroversion, (51) **1111**
  vomiting, uncontrollable, epinephrin in, (53) 325
  vomiting, uncontrollable, serotherapy for, (45) **403**, (154) 1117
  Wassermann reaction during puerperium and, (123) 706
PRESBYOPIA, treatment, (48) 1265
PRESCRIPTION calling for heavy dosage, responsibility of pharmacist, **1319**
  cooperation between physician and pharmacist through prescribing pharmacopeial and national formulary preparations, (11) 1577
  for liver trouble, criticism of, **1812**
  nonsense, **1427**—T, **1792**—T
  of consultant, criticism of, **1655**
  publicity of, enforced by new medical practice act of Great Britain, **375**—E

PRESCRIPTION, significance of stroke across R at head of, 689
  typewritten, **1560**
  writing, (110) 320
PRESERVATION of anatomic specimens in sugar solutions, (54) **1586**
PRESSURE, intrathoracic, removal of pleural effusions, complete, by regulation of, during aspiration, (27) **323**
  negative, in long bones of dog, (127) 485
  negative, in thorax, (95) 1403
  positive (Meltzer), and diaphragm *rupture, subcutaneous,* (83) **783**
PREVENTABLE deaths, economic loss *from,* **54**—E
PREVENTION, rôle of, **615**—ab
PREVENTORIUMS, tuberculosis, **1570**—ab
PRIEST-HEALER in court, **917**
PRINTERS favor Owen bill, **212**—E
  ink advertising bill, **1377**—P
  ink bill, Dr. Wiley defends, **1646**—E
PRIVILEGE and competency of witnesses, construction of amended statutes with reference to, **1829**—Ml
  not waived nor statute modified, **1830**—Ml
PRIZE, De Roaldes, **457**
  for means to cure typhoid carriers, **1804**
PROCHOWNICK'S diet in pregnancy, **617, 928**
PROCTOCLYSIS as curative and prophylactic agent in primary and secondary acute nephritis in children, (152) **243**
  experimental study, **151**—ab
  with sugar solution in diabetes, (100) **1841**
PROFESSION: See also Medicine, Practice; Physician
PROFESSION, and medical education, **776**—ab, **ﬄ389**—ab
  and public, **777**—ab, (17) 1495
  and the sick man, (40) 1028
  and trade-unionism, **1166, 1238**
  candidate for sucker list, **929**—ME
  cooperation of laity and, in public health matters, appeal for, (93) 945
  detrimental effect of present system of hospital administration on interests of, (46) 1265
  from socialist viewpoint, **1166**
  in 1912, **460**
  legal aspects pertaining to, (33) 2067
  organization of, (2) 1264
  organization of, full, necessity for, **1249**—ab
  secrecy of, and industrial accidents, **1719**
PROFESSORSHIP, age limit of, in university, of Budapest, **1972**
PROGLOTTIDES, v-shaped, taenia saginata with, **1821**—ab
PROLIN in animal body, fate of, (62) 318
PROPAGANDA FOR REFORM, (159) 486, (99) 1841
  in Italy, **1503**—ab
PROPERTY *destroyed by health officers,* towns not liable for, **157**—Ml
PROPRIETARY evil, **387**—C
  evil from lay standpoint, **375**—E
  evil in Great Britain, **1557**—P
  foods in infant feeding, uses and abuses of, (14) 1663
  medicinal articles, their substitutes in contract practice, (70) 949
  medicine, pharmacist and physician, (12) **1577**
  one objection to prescribing, **1378**—P
  prescribing, and managing detail man, **1812**—C
  remedies and dermatologist, **1243**—P
PROSTATE, adenomata, (161) 242
  adenomata of thyroid and, growth centers of benign blastomata with special reference to, (45) 627
  and verumontanum, diseases of, diagnosis and treatment, (62) 1028
  at birth, its fetal development, ***110**
  atrophy of, (152) **1674**
  circular knife for, (91) 793
  elements in urethrorrhea, (94) 633
  enlargement of, chronic retention with, mechanism of, (63) 558
  enucleation of, total, series of 236 cases of, performed during two years, (21) **1495**
  giant cells in thyroid and, (119) 1270
  hypertrophy, (42) 166, (71) 1742
PROSTATE, hypertrophy, diagnosis, (139) 1030
  hypertrophy, treatment, (115) 1667
  perineal enucleation of, simple, (95) **84**
  punch operation for small prostatic bars and contracture of prostatic orifice, ***253**
  silver nitrate injections, effect of, **1656**
  surgery, (26) 1105, (128) **1750**
  urethra obstruction by, 26 cases, (38) 1187
PROSTATECTOMY, (88) 161, (59) 247, (82) 1396
  by composite method, (91) 1396
  gas embolism during, fatal, (43) 701
  in aged, (28) 1920
  indications for, (130) **1038**
  local anesthesia for, **1488**—ab
  perineal, finger enucleator for, (64) 1671
  perineal, immediate closure in, (134) **322**
  suprapubic, (8) 864
  suprapubic, after-treatment, (107) 1262
  suprapubic, technic for, (146) 1674
  suspension of bladder, (22) 1105
  technic, improved, (45) **1400**
  urinals for bladder fistulas and after, (71) 791
  Wilm's technic for, (131) 329
PROSTATITIS, (106) 794
PROSTATOTOMY by method of Goldschmidt, ***259**
PROSTITUTION abroad, treatment, **1977**
  among Munich girls under age, (160) 562
  and social diseases, (70) 319, (60) 782
  in Japan, (94) 629
  in New York City, (61) 1922
  venereal diseases vs., (65) 1327
PROTEASES, nephelometry in study of nucleases and, (58) 318
PROTEIN assimilation, **1183**—ab, **1546**—E
  compound, *preparation and properties of,* (59) 318
  extraction from desiccated tissue by aqueous solvent, rate of, (86) 1327
  free diet in chronic nephritis, favorable influence of periods of, (48) **1833**
  in rice, protective, destruction of, **227**—C
  is specificity of anaphylaxis reaction dependent on chemical constitution of, or on their biologic relations? (38) **1921**
  metabolism from standpoint of blood and tissue analysis, (31) 626
  metabolism in infants fed on protein milk, (3) **1324**
  metabolism of normal pregnancy and normal puerperium, (126) **321**
  metabolism, utilization of ammonia in, (47) 1665
  milk as corrective of digestive disturbances, **547**—ab, (2) **1324**
  milk, inexpensive modification of, (149) **1751**
  racemization of, and their derivatives resulting from tautomeric change, (77) 161
  refractive indices of solutions of certain, (53) 318
  serum, blood relationship of animals as displayed in composition of, (75) 161
  serum of horse, rabbit, rat and ox compared to their content of various, in normal and fasting condition, (75) 161
PROTEINURIA, Bence-Jones, (21) 946
  Bence-Jones, in conditions other than myelomatosis, instance associated with metastatic cancer, (33) 159
PROTEUS group, putrefaction with special reference to, (76) 161
PROTONUCLEIN, danger of, **384**—P
PROTOPLASM cell, (108) 794
  water absorption by, colloid-chemical theory of, ***348**
PROTOZOA, granulomatous local infection due to, new, **290**—E
  -like structures in blood in blackwater fever, (36) 1745
PRURITUS ani, (95) 1923
  vaccine therapy of, (54) **791**
PRUSSIAN universities, admission of foreigners to, **917**
PSEUDO-APPENDICITIS, (96) 1037
PSEUDO-ARTHROSIS after fracture of ankle, (57) 166
  osteoplastic operation for, (99) 559
PSEUDOCHOREA, blood-picture in, (110) 705
PSEUDODIPHTHERIA bacilli in middle-ear disease, (45) 790
PSEUDO-ECLAMPSIA, two cases, (29) **1745**
PSEUDOFRACTURES of transverse processes, (14) 1982
PSYCHO-EPILEPSY, (70) 1922
PSEUDOGLIOMA in children, (90) 1581
PSEUDOHERMAPHRODITE, endothelioma of undescended testis in male, (26) 1264
PSEUDOHERMAPHRODITISM, case of, ***825**, (27) 1264
PSEUDOHYPOPYON, syphilitic, (4) 780
PSEUDOLEUKEMIA, (153) 486, (114) 698
  and leukemia, (96) **793**
  Mikulicz's disease in connection with leukemia and, (130) 1932
  paraplegia in, laminectomy and roentgenotherapy in, (141) 1329
PSEUDOMEMBRANES, diphtheric, spiral wire to remove, (148) **486**
PSEUDOMYXOMA of peritoneum, (66) **248**
  of peritoneum arising from perforation of gelatinous ovary cyst and associated with similar cystic disease of vermiform appendix, (34) 86
  of peritoneum involving ovaries and appendix, (106) 1269
PSEUDOSPRUE due to Flexner-like bacillus, (25) 165
PSEUDOTETANUS, Escherich's, (182) 873
PSEUDOTUBERCLE, plague in relation to, as evidenced by vaccination experiments, (23) **1744**
PSEUDOVARIOLA, (110) 1835
PSORIASIS, (115) **91**, (80) 1262
  a true skin disease, (92) 1268
  can it be cured? (102) **1328**
  treatment, (50) 87
PSYCHANALYSIS, (194) 488
  and society, (69) 399
  hysteria, (36) 1665, (34) 1920
  interpretation of imaginative creations by, **464**—C
  what is it? (52) 1493
PSYCHASTHENIA, juvenile, management of, treatment, (104) 629
PSYCHIATRY and gynecology, (112) 328, (134) 706, (99) 1037, (72) 1193, (139) 1406
  in India, (16) 164
  in large cities, (48) 1326
  sociologic phases of, **283**—ab
  teaching of, ***1054**, ***1874**
PSYCHIC factors, influence on infants' nutrition, (99) **1930**
PSYCHOLOGY clinics, need of, in connection with public schools, (27) 1260
  examination, headquarters for, **761**
  experimental, and medicine, (75) 628
  in medical education, (67) 399
  medical, diploma in, established at University of Cambridge, **140**
  of animals, (101) 635
  of blunders in bibliography, (133) **1406**
  of moving-picture exhibitions, (200) **874**
PSYCHONEUROSES, (117) 1335
  acquired, local diseases amenable to surgical treatment as cause of, (111) 1667
  and general practitioner, (98) 698
  functional, (95) 242
  treatment, (56) 404
PSYCHOSES: See also Insanity, Neurasthenia, Neuroses
PSYCHOSES, auto-intoxication and, methods of treatment, (119) 85
  functional, of senile period, (85) 864
  in twins, (122) 162
  Involution, arteriosclerosis probably not important factor in etiology and prognosis of, (47) 81
  manic depressive, series of attacks in, (140) 408
  Much-Holzmann test, **1813**
  neuroses and certain, (8) 551
  pellagra with, (31) **1492**
  psychogenic, (90) 1667
  toxic-infectious, problem of, (55) 782
PSYCHOSEXUAL anesthesia, analysis of, in psychopathic personality, (14) 551
PSYCHOTHERAPY, (5) 322, (45) 477, (22) 1330, (89) **1587**
PSYCHOTHERAPY and physical therapy, **926**—C
  basic principle of, and identity of all systems of mental healing, (21) 1105
  ethics and, (77) 249
  for children, (130) **1196**
  fundamental principles of, (87) 242, (74) 326
  in lung tuberculosis, (107) 1835
  in sexual neurasthenia, (47) 1326
  legitimate use of, (10) 551
  practical, ***657**, (46) 1326
PTOMAIN producing bacteria in human intestinal flora, (22) 946
PTOSIS: See also Enteroptosis; Gastroenteroptosis; Gastroptosis; Splanchnoptosis
PTOSIS, abdominal organs, exercises for, ***654**
  and atony of stomach, (136) 870
  in gynecology, (37) 239
  of eyelid, fascia graft for, (89) 793
PUBERTY, neurasthenia in relation to menopause and, (25) 1330
  premature, (88) 868
  psychic anorexia at, (92) **1334**
PUBIOTOMY, (12) 946, (144) 1751
PUBLIC Health Service changes are still being published, **389**
  Health Service, Friedmann treatment of tuberculosis investigated by, **1572**—ab
  Health Service not a medical monopoly, (13) 1026
  Health Service, report of, **1086**
  Health Service, United States, how it can help eradication of preventable diseases in Kentucky, (88) **1029**
PUBLICATIONS, medical, conservation of energy in, (64) **2071**
PUDDING, poisoning from, (97) 1037
PUERPERAL INFECTION and hemolytic streptococcus, (149) **162**
  diagnosis, (88) 1107
  mercury in, (44) **246**—ab
  opinions desired on treatment, **538**—C
  pneumococci for, importance of, (177) 873
  prevention and treatment, (88) 319
  puerperium in relation to, (21) 1330
  salvarsan in, (41) 1584
  surgical treatment, (89) 629, (8) 1831
  treatment, ***1944**
  treatment at Sloane Hospital for women, (21) **1185**
  vaccines and opsonins in, (150) **163**
PUERPERIUM, abscess, intramural, during, (74) 863
  care of, or involution of uterus, (41) **1028**
  early rising in, (96) **328**, (80) **868**
  herpes zoster in, (150) 708
  management of, (141) 322, (21) 1330, (56) 1493
  non-toxicity of urine during, (109) **1588**
  physiology and pathology of, (46) 477
  prognosis of, based on vagina bacteriologic findings, (105) 951
  protein metabolism of normal pregnancy and, (126) **321**
  salvarsan and neosalvarsan in pregnancy and, (43) **1331**
  scarlet fever in, hemiplegia from, (52) 324
  thrombophlebitis, treatment, **1838**—ab
  tuberculosis in relation to, (13) 1324
  viscosity of blood in relation to arterial tension during pregnancy and, (88) 89
  Wassermann reaction during pregnancy and, (123) 706
PULMOTOR, **309**
  infant, apparatus for artificial respiration on asphyxiated newborn, (11) 694, **1735**—ab
PULSE, alternating, in chronic nephritis, (36) 789
  and blood-pressure in children between 6 and 14, (168) 1198
  at high altitudes, (87) 1748
  electric registration of movements of blood-vessel walls with, (154) 708
  fever and sweating, relations between, (112) 951
  in heart disease, influence of sequestration of venous blood on, (76) **1194**
  jugular, (32) 631
  kidney index and urea index, (60) 558
  permanently weak, oxygen in, subcutaneous injection, (52) **1401**

PULSE, persisting, *in asphyxia neonatorum*, sphygmomanometer for determining, (55) 1401
-rate and metabolism, 2049—E
-rate with blood-pressure in croupous pneumonia, value of studying, (103) 1397
venous, examination of, clinical importance of, (91) 1988
weakness of, permanent, (61) 1746
PUNCH operation for small prostatic bars and contracture of prostatic orifice, *253
PUNCTURE, needle, of maxillary sinus, diagnostic and therapeutic value of, (98) 1581
PUPIL, Argyll Robertson, becoming normal after mercury and salvarsan, *664
equality of, significance of, (77) 1327
paralysis, hemianopic, and hemiopic prism phenomenon, (32) 397
reactions in differential diagnosis, improved technic for estimating, (94) 704
PURE gluten food company, 924—P
PURGATIVES, different effects of, (114) 320
saline, action of, mode of, (78) 1747
PURGING, strong, effect on blood-pressure and heart, *436
PURIN bases in blood, (135) 92
bodies and uric acid in urine, determination of, (111) 1037
elimination of, bases in health and disease, (82) 704
exogenous and endogenous, metabolism of, in monkey, (79) 161
metabolism, (48) 1665
metabolism and purins of some tumors in domestic animals, 2021—ab
metabolism, pharmacologic action of bromin ions on, (101) 170
researches on, (28) 626, (95) 1327, (44) 1665
PURPURA, 473—ab
abdominal, (126) 1337
chronic, animal serum in, (3) 624
coagulation of oxalated plasma with cases of, experimental observations on, (21) 1259
hemorrhagic diseases with, (43) 1746
Henoch's, with intussusception, laparotomy, recovery, (12) 1330
symmetrical area of, on left and zona on right arm, (83) 89
PUTREFACTION with special reference to proteus group, (76) 161
PYELITIS, (124) 870
pregnancy, serology of, (70) 1747
PYELOGRAPHY in diagnosis of surgical diseases of kidney, value of, (66) 1982
PYELOTOMY *for removal* of kidney calculi, 315—ab, *1145
with incision of anterior wall of kidney pelvis, (133) 637
wound, management of, (131) 1337
PYEMIA, skin tuberculosis, extensive, with death from, (51) 1666
PYLEPHLEBITIS, suppurative, 236—ab
PYLOROSPASM, (109) 1335
and *stomach ulcer*, (83) 1587
duodenal sound in, (115) 636
with stomach tetany, gastro-enterostomy for, (87) 1922
PYLORUS, exclusion, (83) 482
exclusion, technic for, (149) 1117, (74) 1927
obstruction and normal stomach of infants, (19) 317
obstruction of jejunum and, due to gall-bladder calculus, (49) 1982
obstruction *with comparative study* of normal stomach of infants, 74—ab
permeability of, after gastro-enterostomy, (163) 708
reflex, significance in true and pseudopyloric stenosis in infants, (2) 1103
spasm of, and *congenital* pyloric stenosis, (90) 399
stenosis, benign, (67) 1982
stenosis, congenital, in infant with development of hour-glass stomach, (83) 406
stenosis, congenital, operative treatment, (183) 563
stenosis, hypertrophic, congenital, three cases, (50) 1396
stenosis, hypertrophic, in adults, (29) 631
stenosis in infants, (24) 695
tape instead of cord for tying off, advantages of, (63) 1746
ulcer, chronic, diagnosis and treatment, (112) 1930
PYORRHEA alveolaris, 2061
PYORRHEA, alveolar, and organic diseases of nervous system, possible relation between, *1779
alveolaris, vaccines for, causes of, (51) 82, (33) 239
PYOSALPINX, drainage in pelvic abscess and, 1485—ab
PYRAMIDAL tract in albino rat, (6) 1918
PYREXIA, (40) 86
syphilis, visceral, *tertiary*, with extreme cachexia and, possibly case of, (29) 1838
PYRAMIDINS, *nucleosides*, (96) 1327
researches on, (95) 1327
PYURIA *and bacilluria*, (70) 88
intermittent, due to infection of prostatic utricle, *1073

Q

QUACKERY *in England*, 611—ab
publicity best cure for, 674—E
transferring vitality to women and girls, 382
triumph of, (36) 324
tuberculosis and, (162) 1198
QUACKS, clearing Texas of, 1905
QUADRICEPS transplantation in paralysis, (84) 781
QUADRUPLETS and their mothers, (125) 1673
QUARANTINE in *maritime* cities of United States, *194
maritime, (73) 1982
state and federal, combine, 843
QUININ, action of, 540
action on leukocytes, (97) 320
anaphylaxis to, (59) 944, (174) 1676
and urea hydrochlorid, 147
and urea hydrochlorid as local anesthetic in anorectal surgery, (132) 1836
deafness *following* dose of, total, (80) 1922
hypodermic administration of, indications and contra-indications, (62) 944
in lobar and lobular pneumonia, improvements in, 1914—ab
influence on hemoglobin metabolism in malspina(A) 401
injectinc follow[illegible], technic for, (60) 1841

RABIES: See Hydrophobia
RACE degeneracy, sources of, (205) 564
RACHICENTESIS, (22) 630
aid to diagnosis, (5) 940
and epinephrin in epilepsy, (166) *1675*
cerebrum hemorrhage, diagnosis by *means of*, (47) 1741
for severe headache in *infectious* diseases, (53) 1034
needle for, new, *1204
with rachitic pelvis, difficulties of, (156) 1271
RACHITIS, (127) 560, (38) 791
and osteomalacia, etiology and *treatment*, (89) 1334
asthma, chronic, in, (145) 1270
etiology of, and metabolism of calcium, (101) 1403
in newborn infants, (116) 1404
metabolism *of minerals in*, (109) 705
phosphorus, action in, (64) 1671
symptomatology of osteomalacia and, in Japan, (66) 1193
tendency to spasmophilia and, in twins, (116) 251
RADIO-ACTIVITY as potent element in *mineral* waters, overestimation of, (44) 2070
induced, action of, (124) 636
of some wells and *thermal* springs in Bombay presidency and in Baroda state, (22) 323
RADIOGRAPHY: See Roentgenography
RADIOTHERAPY, (81) 477, (141) 1502, 1650, (184) 1676, (33) 1745
at St. Joachimstal, (105) 1842
biochemical reaction to, active principle in, (79) 1193
cancer, (76) 249, (159) 562, (170) 872, (132) 1116, (144) 1197
cancer, superficial, *1694
fibro-angioma, (45) 86
in gynecology, (61) 87, (93) 793
lymphosarcoma, (22) 1664
present status of, (186) 1272
skin diseases, (73) 1035
technic *for*, (129) 320
tumor of orbit, (63) 1396
uterine *fibromas*, (89) 1500
uterus fibromas, technic and results in 193 cases, (56) 867
RADISH juice in gall-bladder calculus, (145) 1502
RADIUM and mesotherium treatment of tumors, (107) 90
RADIUM and Roentgen rays, literature on, recent, (27) 700
biologic action of, (98) 1588
in arthritis *deformans*, 2061
in surgery, 1574—ab
in United States, 1882—E
influence *on* blood-pressure and blood-count, (152) 1502
Institute, work of, from August, 1911, to December, 1912, (12) 630
loaned to practitioners, (149) 870
not causal factor in goiter, 1708—E
patients treated by, in Royal Infirmary, Edinburgh, during 1912, (11) 1264, (37) 1265
water, (94) 1108
RADIUS dislocation of carpus and, complete, dorsal, traumatic, primary, (85) 1398
fracture of head of, (103) 483
fracture of lower extremity of, longitudinal, *123, *1537
fracture of ulna with dislocation of head of, (31) 1583
fracture, sprain, of lower end of, and juxta-epiphyseal sprain, 935—ab
tendovaginitis with stenosis at styloid process of, operative treatment, (166) 488
RAILWAY hospital associations, (75) 83
hospital in Mexico, 207
sanitation, 836—E
sanitation, committee on, 2002
street, ambulance-car, first, 1726—C
surgeons meet, 61, 1552
RALES, *pulmonary*, influence of nose *on*, (78) 864
RASH: See Eruption
RAT, albino, brain of, at birth, compared with that of fetal pig, (90) 1327
albino, pyramidal tract in, (6) 1918
cell reaction in, (145) 1270
-proof buildings, 1466—E
stomachs, nematodes in cancer in, (150) 1844
tumor and roach parasites, establishment of causal relation between, 1077—E
RATTLESNAKE Venom: See Crotalin
RAYNAUD'S disease, (72) [illegible]
syndrome and syphilis, (8) 765
RAYS: See also Roentgen Rays; Ultraviolet Rays
RAYS, *light, absorbed*, in *internal* tuberculosis, (214) 874
light, stored, for internal tuberculosis, (148) 232
REACTION, *Abelin's, for salvarsan* in urine, 1094
acetone, *in children, clinical availability of*, (93) 1195
albumin, comparative *merits of*, (118) 951
albumin, dissolved, for stomach cancer, (66) 1068
albumin, in spinal fluid, effect of spinal cord compression on, (51) 324
albumin, in sputum in tuberculosis, *440, 1481
Cammidge, (150) 92, (146) 1116, (141) 1270
cell, in rats, (145) 1270
chemical, quantitative, for control of positive Wassermann results, (51) 1982
cobra venom, technic of, 1247, 1657
cow's milk and human milk, (168) 1195
diagnostic, *four*, (134) 1068
epiphanin, technic *for*, (149) 485
Jarisch-Herxheimer, in ear after treatment with salvarsan, (14) 1537
Klausnor, nature of, 1078—E
luetin, *in syphilis*, (121) 1264, (146) 1329, 1560, *1855
lungs, to intrabronchial insufflation of killed virulent pneumococci and of plain sterile bouillon, (42) 1261
meiostagmin, (134) 1196
meiostagmin and epiphanin, in diagnosis of cancer, (46) 1921
meiostagmin, technic for, (127) 231, (141) 1674, (115) 1931
of toxins, 1093
oxydase, (100) 1588
oxydase, in differentiation of *acute* leukemias, (16) 1924
oxydase, in placenta, (79) 950
precipitation, in syphilis, (150) 252
precipitin, colloidal protection in certain phases of, possible importance of, (40) 1260
Russo, *occurrence of*, 1176
Russo, *urinary* typhoid test, modification *of*, and use in 1,000 cases, (44) 1833
skin, cancer, (34) 160
REACTION, skin, in exudative diathesis, (95) 1195
skin, under influence of injected serum and colloidal substances, modification of, (101) 1842
stasis, in arteriosclerosis, (75) 1402
tuberculin, diagnostic, practical significance of, (44) [illegible]
tuberculin *from bovine* tubercle bacilli in children with surgical *tuberculosis*, (92) 1088
tuberculin, human and bovine, in children, (177) 1753
tuberculin, in pleura, (141) 408
tuberculin, local, research on, (31) 918
tuberculin, refractory phase in, [illegible] 1564
tuberculin salve, (111) 1673
tuberculin, skin, general reaction to, (123) 952
tuberculin, skin, in children (56) 401
tuberculin, skin, in prophylaxis of tuberculosis, (135) 706
tuberculin, subcutaneous, for adults, superior reliability of, (127) [illegible]
tuberculin, subsequent history of 1,000 patients who received, (74) [illegible]
tuberculin, value and efficiency of, (49) [illegible]
urobilinogen, in urine early in scarlet fever, (170) 1750
Wassermann, and cobra venom test for syphilis, 1657
Wassermann, and congenital syphilis, (9) [illegible]
Wassermann, and diagnosis and treatment of syphilis, [illegible]
Wassermann, and salvarsan in diagnosis and treatment of syphilis in ear, nose and throat affections, (111) 81
Wassermann, details in, [illegible]
Wassermann, during pregnancy and puerperium, (125) [illegible]
Wassermann, effect of antisyphilitic treatment on, [illegible]
Wassermann, in diabetes mellitus and its relation to acidosis, *1139
Wassermann, in internal diseases, [illegible]
Wassermann, in Johns Hopkins Hospital, [illegible]
Wassermann, in lead poisoning, [illegible]
Wassermann, in [illegible] stages of syphilis in general, [illegible]
Wassermann, in 700 consecutive admissions to Danvers State Hospital, results, [illegible]
Wassermann, interpretation of results of, [illegible] *265
Wassermann, length of latent period in, (55) [illegible]
Wassermann, modifications of technic, (21) 397, (47) 1441, (3) 1979
Wassermann, new and apparently accurate modification of, [illegible] 1594
Wassermann, positive, necessity for specific treatment for syphilis in contemplating marriage with, (105) [illegible]
Wassermann, positive, with sarcoma, (116) 252
Wassermann, properties of guinea-pig serum interfering with, [illegible] 1672
Wassermann, results of 11,000 in Michael Reese Hospital, [illegible]
Wassermann, salvarsan in eradication of, value of, 2061
Wassermann, skin reaction in syphilis in relation to, [illegible]
Wassermann, sources of error in, (62) 863, (92) 1114, (123) 1745
Wassermann, value of, (4) [illegible]
Wassermann, what practitioner should know of, [illegible]
Weil test for syphilis, technic, 1247
RECIPROCITY act, no appeal from board's decision under, 1257 MI
and educational standards, 1639
RECKLINGHAUSEN'S disease with hypernephroma, (150) 1270
RECORDS, clinical, hospital, *1205
RECTUM, anesthesia in operations on, local, (74) 83
cancer, (70) 857, (51) 1275, (163) 1468
cancer, combined operation for, (55) 1102
cancer, diagnosis and treatment, (14) [illegible]
cancer, intramural spread of, (5) 1108
cancer of colon and, irremovable, appendicostomy instead of colostomy for obstruction due to, (5) 555

RECTUM, cancer of sigmoid flexure and ampulla of, diagnosis, early, (75) **950**
cancer, two patients surviving many years with, simple and successful method of dressing inguinal anus, ***1418**
common diseases of, operation, when required in, without general anesthesia or pain, (69) 1493
elecetricity in diseases of, (74) 1493
hemorrhages, method of controlling, ***1619**
hyperpyrexia in, in children, (104) 1037
medication by, (59) 557, **770**
plug of mucus and epithelium, intestine stenosis in newborn infant with, (82) 406
polyps, bleeding, in, (34) **1583**
polyps in sigmoid flexure or, (113) 1335
quinin and area hydrochlorid as local anesthetic in surgery of anus and, (132) 1836
section for pelvis abscess in men, (55) **1666**
serotherapy by, occasionally effectual, (38) 1191, (60) 1266
serum and toxin administered by, action of, (111) 1749
shelf for operations on vagina and, ***1537**
skin flap to interpose between urethra and, for fistula, (36) 166
sliding, in cure of various defects, (62) 1982
strictures, congenital, (60) 632
surgery of anus and, (27) 86
temperature in axilla and, comparison of, (47) **2070**
tuberculosis, surgical, of colon, anal canal and, (44) 480
tumors, melanotic, primary, (56) **701**, (38) **1584**
RECURRENT FEVER: See Relapsing Fever
RECURRENCES, *nature and cause of, experimental research on*, (180) **1753**
RED CROSS missions and cholera mission, return from Bulgaria, **222**
REFLEX, antagonistic, tibialis anticus, (90) **1748**
bone, diagnostic importance, (64) **404**
nose and throat, causing cough, (28) 861
phenomena from helminths, (103) **794**
pyloric, significance in true and pseudopyloric stenosis in infants, (2) **1103**
uterus, (136) 699
vasomotor, elicited by heat and cold from regions devoid of temperature sensibility, (36, 37) 1832
REFRACTION, analysis of 13,000 cases for errors of, (18) 1577
errors of, and genius, **1562**—ab
errors of, modern treatment, (99) 785
sociologic aspects of errors of, (140) 478, (6) 780
REFRIGERATORS, efficiency of, (28) 1795
REFUSE disposal work, need for more accurate data in, (20) 239
house treatment of, (22) 239
incineration of, (28) 239
materials, (21) 239
municipal, collection of, (23) 239
municipal, disposal by burial method, (25) 239
REID, fetal peritoneal folds of Jannesco, Treves and, relation to Jackson's membrane and Lane's kink, (77) **1396**
RELAPSING FEVER in Darjeeling district, (25) 523
in Persia, (91) 1114
malignant granuloma with, Pel-Ebstein type, (184) 873
transmitted by louse, (49) **1670**, ***1647*—E**, **2061**
RELIGIOUS matter, practice of medicine as, **472**—Ml
press, nostrum advertising in, and influence of American Medical Association, **1161**—E
RENAUT, Professor, anniversary of, **1009**
RESEARCH, medical, encourag[illegible] of, **1244**—C
medical, encouragement of, by payment for contributed articles on scientific subjects, **906**—E
medical, in medical education, value of, **1888**—E
medical, protection of, report of committee for, **2009**
medical, South African Institute for, **1472**
RESEARCH, methods of, available in study of medical problems, (23) 556
society and medical school, (67) 477
spirit of, in medicine, (55) **82**
under national insurance act, **1007**
RESORCIN, sensitiveness to, unusual, ***2035**
RESORTS, sanitation at, and vacation season, **1232**—E
RESPIRATION, artificial, devices for, **1182**—ab
artificial, effective, simple devices for, in emergencies, ***1407**
circulation and, **1542**—E
circulation and, in epilepsy, (43) **1833**
exercises, (44) **1497**
exercises, technic for, (41) 1746
in children, influence of artificial pneumothorax on mechanism of, (103) 1335
in children, relation to and influence of normal and abnormal dental arches on, (39) 696
inadequate, in anemia, means for *improvement*, (134) **1116**
rate in disease of respiratory tract, (123) **407**
types of, in health and in acidosis, (184) 1753
utilization of forces of, in scoliosis, (107) **1335**
RESPIRATORY center, pharmacology of, (53) **1922**
center, salt perfusion of, in frogs and effect of calcium chlorid and potassium chlorid, (57) 1922
interchanges, influence of exclusion of liver on, (82) 249
system, (6) 80
tract, diet errors and disturbances of upper, (89) 399
tract, diphtheria, chronic, (39) **1331**
tract, *foreign bodies in esophagus* and, (35) 1579, (131) 1932
tract *infection, prevention of, in* schools, (32) 159
tract, respiration rate in disease of, (123) **407**
tract, tuberculosis of upper, campaign against, **221**
tract, upper, diseases of, in singers and public speakers, treatment, (38) **160**
tract, upper, more familiarity with, plea for, (98) 320
RESPIRAZONE, **1899**—P
RESPONSIBILITY in certain forms of unsoundness of mind, (30) 1400
REST-cures in theory and practice, (74) **88**
in nephritis, **1732**
Nature's remedy, (64) 1742
RESUSCITATION from electric shock, report of committee on, **2009**
from mine gases, committee on, **2002**
RETINA blood-vessels, central, effect of chronic glaucoma on, (35) 1028
changes in adolescents, (24) 397
detachment of, established treatment, results, (1) 780
structure of, in mammals, (138) 870
RETRACTION movements of eyes, acquired, (30) 397
REXALL orderlies and other Rexall products, **1243**—P
RHEOSTAT, light-carrier with lens and, for urethroscopy, ***182**
RHEUMATICIDE, **66**—P
RHEUMATISM, (112) 1263
acute, articular, autotherapy in, (12) *940*
acute, articular, consecutive to pseudomembranous pharyngitis, (199) 1754
acute, articular, spinal cord complications in, (94) 1929
acute, inflammatory, salicylic acid in, (8) **1264**
acute, tonsillitis as factor in, (183) **1676**
articular, blood-picture in, (110) 705
articular, chronic, characteristic lymphocytosis in, (63) 1986
children, (21) 700, (59) 1028, (23) 1264
classification and diagnosis, (27) 1920
conditions commonly called, (39) 160
[illegible] ***1223**
gonorrheal, management of, (64) 241
nodose, (74) **949**
nose as source of infection in acute, (68) 1986
orchitis due to, acute, ***1608**
thorium X in anemia, leukemia and, (82) 1113
REHUMATISM, tuberculous, (6) 629
tuberculous, and chronic arthritis, (53) **1401**
RHINITIS: See also Colds
RHINITIS, acute, anaerobe associated with, ***2033**
atrophic, and ozena, treatment, successful, (93) 1922
atrophic, drainage of accessory sinuses in, (100) 1581
fibrinous, (109) 1328
posterior in infants, (24) **2069**
RHINOLOGISTS, operating-table for, ***1951**
RHINOLOGY, dental aspects of, (16) 1109
laryngology and, in general practice, (104) 399
RHINOPLASTY, finger in, improved technic, (154) 162
nose entirely restored by bone transplantation and, ***728**
with finger, ***730**
RHIZOTOMY, (67) 867
erythomelalgia, (76) 1840
gastric crises in tabes dorsalis, (18) 239, (147) **561**, (62) **1111**
for herpes, mal perforant, hyperchlorhydria and membranous colitis, (58) **167**
for pain and spasticity in spastic paraplegia, ***981**
in spastic paralysis and operation to reduce force of antagonist muscles, (135) 1844
RHODE ISLAND College of Nursing, get rich quick scheme of the, **600**—E
state board April report, **1322**
state board January report, **543**
RHUS poison, *experimental study*, (18) 1739
RIBS, absence of, congenital, ***895**
boring of, to drain effusion in, (106) **484**
cartilage, transplantation into pedunculated skin flaps, (34) **1325**
wedge resection of, to reduce thorax in lung tuberculo[illegible] (165) **487**
RICE, protein [illegible] destruction of, 22[illegible]194) 488
RICHET has [illegible] 399 [illegible]rsary, **221**
RICIN, ant[illegible] 1665, [illegible]r, (50) 1670
RICKETS: See Rachitis
RIGG'S Disease: See Pyorrhea, Alveolar
RINGER'S solution, pregnancy toxicosis cured with injection of, (80) **793**
RINNÉ, Weber and Schwaback tests, prognostic value of, (82) 477
RIPENING, *artificial*, of bitter fruits, **601**—E
"ROB," syphilis specific, (43) 1982
ROCHE'S syrup thicol, **1974**—P
ROCKEFELLER Institute and American universities, study at, **1473**
Sanitary Commission for eradication of hookworm, **851**
RODS as color-perceptive organs, (37) 1028
ROENTGEN RAY, action on dog's thymus, (54) 247
action on fetus membranes, (110) 1588
and radium, literature on, recent, (27) 700
and tuberculin in recognition of early lung tuberculosis, (67) 1396
burn, cumulative, (115) 328
burns, severe, (93) **869**
dermatitis, epithelioma developing at site of, **2025**—ab
dermatitis from standpoint of general practitioner, (94) 1268
Diagnosis: See Roentgenoscopy
enhancing action of fluroescent drugs by, (140) 252
exposure of adrenals to, effect on blood-pressure, (150) **1198**
exposure of spleen, leukocytolysis induced by, curative action of, (45) 1985
exposures, shriveling of *thymus in* six dogs under, (92) 89
generator, improved, *(95) 1189*
in progressive medicine. (91) 629
injuries, physician convicted for, **533**
liability of employers for injuries from, applied on their demand, **1908**—Ml
measurement of permanent teeth *before* eruption to provide for early regulation of dental arch, (110) 161
moving pictures, technic for, (120) 870
power, new unit of, (25) **1664**
scar, ulcers of scalp in, operation for, new, (45) **1670**
ROENTGEN RAY, what it should mean to physician, (113) 1667
ROENTGENOGRAM admissible in evidence, **623**—Ml
mediotarsal subluxation as shown by, (33) 81
ROENTGENOGRAPHY, adhesion of pericardium, (50) 631
age determination by. Rotch method of, (147) 479
barium sulphate in, **389**
clinical factors in, (72) 1666
duodenum ulcer, **1374**
duodenum ulcer diagnosed by means of, serial, (87) 1667
foreign bodies in eyeball, (89) *554*
heart disease, (96) **698**
instantaneous, from medical standpoint, (59) 1586
kidney and ureter calculus, (75) **550**
seminal ducts and vas deferens by injecting collargol, ***800**
stomach motility in infants studied by, (1) **1576**
technic for, (103) 250 (72) 1586
ROENTGENOSCOPY, (44) 240, (11) 555, (113) 560, (9) 2066
alimentary aberrations, (45, 53) **82**
and illumination of stomach from within, *comparison of findings* with, (63) 325
aneurysm of abdominal aorta, value of, (119) 1264
appendix, (79) 1586
appendix shows it actively movable, (127) 1501
bladder tumors, (100) 1262
bronchial lymph-nodes, enlarged, (105) 1195
cancer of esophagus, new technic, ***1283**
colon functioning, (102) 1588
digestive tract, important points in, (30) 1186
duodenum disease, (138) 1750
duodenum, technic for, (80) 2072
[illegible]olon, (85) **793**
13[illegible]
[illegible]ider, *improved*
[illegible]88
findings, deposits of iodipin interfering with, (91) 327
foreign bodies, value of, (70) 83
gastro-intestinal lesions, value of, (83) 864
gastro-intestinal tract in types of so-called functional nervous disorders, value of, **1911**—ab
gastro-intestinal tract, palpation and, (79) 249
heart, (68) 1671
heart, hypertrophy of left, incipient, (58) 1671
heart in exophthalmic goiter, (120) 560
heart valves, topography of, revealed by, (7) **624**
hernias, (80) 1927
infant diseases, (31) 1191
intrathoracic goiter and thymus hyperplasia, ***117**
kidney pelvis, complications from, (144) **1338**
kidneys, technic for, (73) 558
large intestine with tumors in kidney region, (101) 950
lung disease, (26) **480**
lung tuberculosis in infants, (52) 247
malposition of stomach and large intestine, (73) 1189
normal stomach in right decubitus, (53) 1746
primary focus in lung, (73) **1267**
stomach diseases, (120) 699
stomach ulcer, (102) 1403
thorax lesions, (117) 1836
tuberculosis in children, value of, (37) 86, (34) 1926
tuberculosis of hilus in children, (98) 950
ROENTGENOTHERAPY, actinomycosis, (146) **707**
cancer about eye, (46) 1580
cancer cured by mesothorium rays and, **1972**
cancer of breast, primary, inoperable, (67) 1493
department, new, at cancer hospital, **916**
dosage, (151) 252
effectual stimulant in simple anemia in girl of 7, (50) 247
epithelioma, massive doses, (92) 1189
exophthalmic goiter, (6[illegible]) 1666
genital and breast cancers and myomas, (87) 1811
in gynecology, (100) 90, (92) 249, (93) **406**, (175) *562*, (93) 793, (107) 1269

SCARLET FEVER, spread of, (16) **941**
transmission to animals, experiments on, (67) 248, (22) **1578**
uremia due to, with blindness, (54) **631**
urobilinogen reaction in urine early in, (112) 1115, (129) **1750**
SCARLET RED, action on roentgenized skin, (27) 865
and amidoazotoluol, clinical value of, (70) 1402
as dressing after radical mastoid operation, (24) 1399
in ulcer of stomach and duodenum, **1915**—ab
thickening of Thiersch grafts, excessive, due to component of, (28) **1980**
SCHAFER'S vaccines, do untoward results follow use of phylacogens or, **308**
SCHAUDINN, budding and other changes described by, for entamoeba histolytica seen in a race of E. tetragena, ***1220**
SCHISTOSOMA hematobia, (8) 85
SCHLATTER'S disease of tibia, (62) **702**
SCHMIDT'S antimeristem for cancer, **766**—P
meat digestion test, (60) **1035**
nuclei test of pancreas functioning, (142) **1117**
SCHOLARSHIPS for medical students entering army, **1896**
in medicine, (50) 82
SCHOOL: See also Colleges, Education, Medical; University
SCHOOL, children, Colorado method for examination and care of, (10) 780, (67) 863
clinics, (102) 1923
correspondence, for nurses, **1712**—E
diphtheria epidemics in, (96) **634**
disinfection of, **388**—C, (45) 782
divided, **931**—ab
for cripples in Cleveland, management, maintenance and efficiency of, (12) 780
fresh air in hospitals and, prophylactic and therapeutic value of, including sunlight therapy, (42) **1982**
health organization in, **779**—ab
health supervision of, state provisions for, **1904**—ME
Hygiene, International Congress on, **1237**
hygienic, explanation of provision to secure, **1256**—MI
life, influence on fitness for military service, **299**
lunches in elementary and secondary schools, relative physical advantages of, (25) 1492
medical, academic, relation to medical community, (18) 1919
medical, and research society, (67) 477
medical, army, commencement at, **1893**
medical, children's hospital and the public, (23) 860
medical, improvement in, **690**—ab
medical inspection, (99) 629, (73) 697, **1322**—ab, (41) 1395, (22) 1980, **1973**
medical inspection and dental caries, (57) 696
medical inspection of country, plan for, (107) 629
medical inspection of, from standpoint of educator, (31) 159
medical inspection of, from viewpoint of health officer, (30) 159
medical inspection of, function of, in checking retardation, (84) 319
medical inspection of, in rural communities, **70**—ME, (107) 629
medical inspection of, in South Carolina, (148) 1329
medical inspection of, what not to expect at this time of, (45) 318
medical, organization of, **774**—ab, (63) 1326
medical, Paris, poverty of, **1239**
medical, pioneer, in Illinois, (52) 398
medical supervision of, as state wide proposition, (83) 319
medical, system of intercommunication arranged among London hospitals and, **915**
open-air, value in fighting tuberculosis, **1090**—ab, (21) 1980
open-window in, (13) **1919**
public, need of psychologic clinics in connection with, (27) 1260
SCHOOL sanitation, (66) 1327, (75) 1982
sanitation and state board of health, (87) 1743
seating and scoliosis, (93) 629
single session each day in, **1807**
teeth hygiene in, (115) 794
tuberculosis and, (207) 564
ventilation, experiment in, (23) 1831
SCHWABACK, Weber and Rinné tests, prognostic value of, (82) 477
SCIATIC NERVE, blocking, (103) **951**
blocking, technic for, (142) 1406
disposition of femoral artery and, anatomic considerations of, (23) 1191
SCIATICA, detection of simulation in alleged, (105) **328**
epidural injections in, (133) **560**
extension in treatment, (115) **1842**
treatment, (103) 161
SCIENCE and agricultural experiment stations, **1156**—E
and newspaper sensationalism, **211**—E
SCISSORS, iris, new, ***1226**
SCLERA decompression for intra-ocular tension, (30) 781
sarcoma of, rarity of, ***1766**
SCLEREMA adiposum, (128) 1030
SCLEROCORNEAL margin, dermoid at, two cases, (16) 1739
SCLERODERMA inusitatum, (73) 944
with subcutaneous calcareous deposits, (21) 1399
SCLEROMA in Russia, (127) 329
SCLEROSIS: See also Arteries, Diseases of
SCLEROSIS, amyotrophic lateral, and epilepsy, **1319**
coronary, **203**—T
SCOLIOSIS, Abbott's method of correction, (79) 1671, (102) 1672
Abbott's method of correction, necessity for modifying technic, (49) 247, (28) 1191
apparatus for exercising back in, (70) 791
congenital, (7) 859, (105) 1403, (64) 1498, (18) **1664**
correction of, (67) 1986
correction of fixed types of, complicated by visceral derangements, **1817**—ab
diagnosis and treatment, (15) 1744
from malformation of fifth lumbar vertebra, treatment, (61) **1498**
measurement of, (42) **1497**
normal positions of spine in relation to, **1817**—ab
plaster jackets, corrective, for, (60) 1580
respiration in, utilization of forces of, (107) **1335**
rotation treatment, **1817**—ab
school seating in relation to, (93) 629, (44) 782
sciatic, condition frequently called, (3) **1491**
symposium on, **1817**—ab
treatment, (44) 160, (17) 1264, (83) 1841
SCOLIOSOMETER for measurement of scoliosis, (42) **1497**
SCOPOLAMIN for morphin addiction, disadvantages of use of, (89) **1748**
in general anesthesia, danger of, (112) **1588**
in labor, **1814**
-pantopon "exploratory twilight sleep", unreliability and by-effects of, (157) 1271
SCORBUTUS, infantile, (37) 1034, (38) **1331**
infantile, blood and bone marrow changes in, (57) **1498**
infantile, early forms of, (136) **1116**
infantile, in infant fed on pasteurized cow's milk, (33) 1395
infantile, in school children, (52) **791**
infantile, in which swollen joints resembled acute articular rheumatism, ***279**
SCOTOMA, scintillating, associated with migraine, (91) 864
SCREW driver, safety, and screws for Lane plates, (79) 83
worm in nose, (114) 1667
SCROFULA: See Tuberculosis, Lymph Nodes
SCROTUM, plastic operation providing new outer covering for penis and, (73) 867
SCURVY: See Scorbutus
SEAL, Pribilof fur, spermiogenesis of, (9) 1918
SEA-SHORE from therapeutic standpoint, (133) **1116**
SEA-SHORE sanatorium for children, (122) 1336
treatment of osteomyelitis, (4) **1491**
SEASICK remedy, Mothersill's, **1319**
SEASICKNESS, Girard treatment for, **1903**
SEA-URCHIN, rate of oxidations in unfertilized egg of, (41) 1665
SEA-WATER treatment, literature on, **69**
SEARS, ROEBUCK & CO., and patent medicine advertising, **134**—E, **144**—P
SEATTLE SUN and quacks, **1809**—P
SEBORRHEA, lip, lower, its relationship to epithelioma, (102) **698**
SECRECY, medical, binding nature of, **1720**
SECRETARIES, county, pleasures of, (65) 398
good, should be given life sentences, **57**—E
of surgical, gynecologic and obstetric societies, **540**
SECRETIONS, breast and ovary, internal, interrelations between, (124) **706**
glandular, toxic action of, as factor in syndrome of ileus, (61) 1193
internal, and dermatology, (1) **1982**
internal, and glycosuria, (137) 1932
internal, has breast an? (100) 950
internal, how far have we got with clinical use of? (58) 1982
internal, influence of ovary as organ of, (6) **1324**
internal, influence on dentition, (101) 559
internal, influence on mind, (130) 91
internal, of testicles, experimental research on, (203) 1754
milk, physiology of, (50) 1264
stomach, **1305**—E
stomach, depressing influence of emotions on, (66) **1986**
stomach during digestion, research on, (158) 1198
stomach motility and, influence of electric stimuli on, (89) 1402
thyroid, perverted, and exophthalmic goiter, high-frequency electricity in, (1) **694**
vagina, puerperal, streptococci in, (191) 1754
SECTARIANISM, medical, ***331**, **539**—C, (102) 629
SECTION of Spinal Nerve Roots: See Rhizotomy
SECTIONS, celloidin, rapid method for, ***363**
SEDIMENTATION and agglutination and their bearing on water storage, (22) 786
SELECT Committee on Patent Medicines, 1466—E, 1477—P
SELENIUM vanadian, in cancer, (97) 399
SEMINAL calculi simulating nephrolithiasis, (98) 1262
ducts, roentgenography of vas deferens and, by injecting collargol, ***801**
emissions, involuntary, and impotency, (64) 1028
SEMON, Sir Felix, work and influence on laryngology, (14) 1109, (23) 1399
SENATOR from Oregon, Dr. Harry Lane selected as, **212**—E
SENILITY again deferred, **206**—E
arterial, premature, (77) 319
functional psychoses of, (85) 864
premature, and ateleiosis, (15) 699
SENSORY changes in diseases of nervous system, diagnostic value of, (10) 1744
disturbances, (19) 630
ganglia of birds, histology of, (7) 474
SEPSIS: See Septicemia
SEPTIC TANKS and disposal of sewage in general, (162) 1502
and sewage-disposal plants, literature on, **1481**
SEPTICEMIA, acute, due to bacillus pyocyaneus, (1) **1329**, (11) 1923
bacillus, proteus group, isolated from case of, (14) **2068**
chronic, influence on eye disease, (19) 1983
diphtheria, (5) 1324
gonococcus, fatal case, (109) 242
in infectious diseases, frequency of, (155) **1118**
meningococcus, and meningitis in young man with joint and visceral lesions from congenital syphilis, (34) 947
SEPTICEMIA pneumococcus, from gall-bladder calculus, (118) **1115**
Puerperal: See Puerperal Infection
secondary, in convalescence from typhoid, (96) **169**
tetragenus, (80) **1987**
vaccine therapy of, (14) 1744
SEPTICOPYEMIA, acute, (36) 1395
SEPTUM: See Nose, Septum
SERO-AGGLUTINATION of pneumobacillus, (78) 1499
SERO-ANAPHYLAXIS and special forms of tuberculosis, (50) 701
SERODIAGNOSIS, Abderhalden technic, (63) **949**
Abderhalden's, for dementia praecox, technic of, **1727**
cancer, (122) 484, (69) 867, (120) **1116**, (52) **1585**, (86) 1586, (97) 1588, (56) **1839**, (103) **1842**, (31) 2069
chemicals simulating, (154) 1751
dementia praecox and paralysis, (135) 560
echinococcosis, (101) 869
echinococcosis and helminthiasis in general (162) 1271
Emery technic, 820 cases of, on 461 patients, (128) 401
goiter, (138) 1674
gonococcus vulvovaginitis, (4) 1324
gonorrhea, (75) **697**, (53) 398, (69) **1666**
leprosy, (123) 1501
pneumococcus infection, (197) 1754
pregnancy, **309**, (180) **562**, (87) 863, (107) **951**, (131) 1116, (88) **1396**, (69, 86) **1586**, (193) **1754**, (56) **1839**, (91) **1841**, (114) 1931, ***1947**
pregnancy and tumors in genitalia, (87) **950**
pregnancy dermatitis, (33) **2069**
pregnancy, dialysis technic for, unreliability of, (111) 1335
pregnancy, history of, (74) 1586
streptococcus, gonococcus and other bacteria in infective deforming arthritis and arthritis deformans, ***1208**
syphilis, (158) 92, (79) 404, (143) 870, (64) 949, **1016**, (57) 1035, (116) 1335, (101) 1672
syphilis applied to cerebrospinal fluid, (114) 1335
syphilis at ophthalmic clinic, (98) 1334
syphilis, technic for, (88) 249, (139) 1674
syphilis with cadaver serum, (17) 1259
tabes and general paralysis, atypical forms of, considered in light of, (71) 241
tuberculosis, surgical, (91) 559, (133) 560
tuberculosis, value of, (40) 402
tumors, (129) 485, (90) **1841**
SEROLOGY, absorption and digestion in light of, (140) 707, (149) 1270
of pregnancy pyelitis, (70) 1747
SEROTHERAPY: See also Autoserotherapy
SEROTHERAPY and vaccine therapy, (4) 1668
and vaccine therapy defined, ***1459**
antitoxin in blood of diphtheria patients after, (76) 326
cerebrospinal meningitis, (74) **783**, (27) **1578**, (170) 1676
drug and, combined in experimental pneumococcus infection, (125) 1116
eclampsia, (151, 152) **1117**
erysipelas, (90) 1587
hemopoietic, (79) 1987
melena neonatorum, (139) **485**
meningococcus, of gonorrheal arthritis, (36) **1984**
nephritis, (122) **251**
pemphigus, malignant, cured by intravenous injection of 20 c.c. fresh human, (157) **1752**
pneumonia, (4) **80**
principles of, (106) 1189
rectal, inefficiency of, (64) 867
rectal, occasionally effectual, (38) 1191, (60) 1266
skin diseases, (66) **167**
small-pox, **880**
tetanus after symptoms have developed, ***863**
tetanus, prophylaxis, (111) 794, (114) **1196**
tetanus, successful, incubation fifteen days, (116) 794

- SEROTHERAPY, tuberculosis, (143) 1030, (138) 1116, (29) 1395, (61) 1840
  - typhoid, efficacy in pure cases, (40) 1331
  - *vomiting of pregnancy*, (45) **403**, (154) 1117
  - woody phlegmon cured under, (104) 1195
- SERUM, *action of*, on toxins of aqueous extracts of organs, (110) 90
  - action *of plasma* and, on certain objects used in biological test for epinephrin, comparison, (35) **626**
  - action of toxin and, administered by rectum, (111) 1749
  - anaphylaxis, (112) **1750**
  - and colloidal substances, *injected*, skin reaction under influence of, *modification of, (104)* **1842**
  - animal, in chronic purpura, (3) 624
  - animal, simple, in surgery and therapeutics, (63) **1193**
  - antidiphthericum and antidiphtheric globulins, **45**, **1074**
  - antigonococcus, **1227**
  - antimeningitis, subdural injection in cerebrospinal epidemic meningitis, accidents following, ***1937**
  - antimeningococcus, **1074**
  - antimeningococcus, in gonorrheal urethritis, (55) **247**
  - antistaphylococcic, polyvalent, potent, preparation and employment of, ***1070**
  - antistreptococcus, **1227**
  - antistreptococcus, used locally in vaccinal ulcers, (7) **940**
  - antitetanic, in tetanus, (81) 1262
  - *Blood:* See Blood Serum
  - cancer, inhibition of hemolysis by, (48) **627**
  - cholera, hog, virulent salt solution as virus in manufacturing, (37) 1920
  - destruction of epinephrin and constrictor substances *of*, by oxygenation in blood-vessel walls, (96) 319
  - ferments in, of insane, (110) 1335
  - *fetal*, to cause onset of labor, (75) **1107**
  - guinea-pig, properties of, interfering with Wassermann reaction, (100) 1672
  - guinea-pig, toxic action of, in contact with kaolin, (30) 946
  - horse, in hemorrhagic disease of newborn infant, ***1154**
  - horse, hemorrhage controlled *by* local application of, ***721**
  - horse, normal, **1227**
  - horse, rabbit, rat and ox, compared to their content of various proteins in normal and *fasting* condition, (75) 161
  - infected wounds at *time* of injury treated with use of iodin and, (63) 783
  - *meningitis*, danger in, possible source of, ***1348**
  - plague, antitoxic, preparation of, (27) **1745**
  - proteins, blood relationship of animals as displayed in composition of, (75) 161
  - sarcoma, **70**
  - vaccines are given in *infections* instead of, **1727**
- SEWAGE and garbage disposal in Germany, (44) 1395
  - disposal, country water supply and, **540**
  - disposal in general, and septic tanks, (162) 1502
  - disposal plants and septic tank, literature on, **1481**
  - pollution of Great Lakes, (66) 863
- SEWER-GAS and its effects, articles on, **1977**
- SEX apparatus and ear, nose and throat, (112) 1009
  - bearing on operation in appendicitis, (27) 1033
  - characteristics, secondary, present status of knowledge of, (60) **949**
  - development in *infant*, abnormal, probably due *to* tumor of pineal gland, (25) 1260
  - disorders and disease of nervous system, (119) 1328
  - disorders in male, (64) 1023
  - emotion of, and color sense, (2) 85, (70) 899
  - ethics, medical orientation, (106) 478
  - fetishism, (122) 1156
  - function, elements of abnormality and perversion of, (60) 477
  - hygiene and prophylaxis, education in, **1231**—E
- SEX hygiene, instruction in, (57) 1395
  - instruction in school, ***357**
  - laxity, misinformation on, **291**—E
  - organs, infantile, stimulation of development of, **1319**
  - organs, intestine disturbances from, (40) 557
  - physiology of sexual glands, (181) 1272
  - powers of resistance of, in infancy, **1010**
  - predetermination of, (97) 328, **539**
  - problems of today, (79) 1922
  - proportion of males and females born, (137) **1337**, **1902**
- SEXOLOGY, medical society for, work outlined for, (90) 1929
- SHAMPOOS, dry, dangers from, **1710**
- SHARPLESS digestible bread, **1379**—C
- SHEEP-SHEARS, modified, in surgery, ***1784**
- SHELF for rectum and vagina operations, ***1537**
- SHIPS, emergency lighting plant for, **1957**
  - hygiene of, below decks, (108) 1397
- SHOCK, (59) 87, (15) 630
  - during anesthesia, (10) 1923
  - management of, (115) 1397
  - surgical, nature of, treatment, (72) 697
  - surgical, pituitary extract in, (35) 1740
  - theories and experimental data to date, (14) **475**
  - therapy of, experimental study, **238**—ab
- SHOULDER and arm paralysis of poliomeylitis, (67) 1580
  - -joints, ankylosis of vertebrae, hip and, (87) **1987**
  - -joint dislocation, reduction *of*, *procedure* for, (6) 1923
  - -joint dislocation, *unreduced*, *old*, reduction of, (20) 625
  - -joint subluxation of, in *infants* and children, (31) 1745
- SIGMOID, adhesion, **150**—*ab*
  - diverticulitis, **1101**—ab
  - flexure, cancer of ampulla of rectum and, diagnosis *of*, *early*, *(75)* **950**
  - flexure, kinking of, (125) 1843
  - flexure, *movable and abnormally* long, (104) 635
  - flexure, polyps in rectum or, (113) 1335
  - flexure, volvulus *of*, (153) 1020
- SIGN, leg, new, (72) **326**
- SILK, fine, for ligature and suture material, ***1119**
  - ligaments, intra-articular, in paralytic *joints* of *poliomyelitis* anterior, (1) **1491**
  - tendons, implantation *of*, in residual paralysis of *poliomyelitis*, results from, (2) 1491
- SILVER foil *in surgery*, ***1119**
  - nitrate, *applied* within eustachian tube for tinnitus, (19) 81
  - nitrate, gonorrheal conjunctivitis aborted by *two* per cent, solution of, (91) 1494
  - nitrate *prostatic* injections, effect of, **1656**
- SIMS, MARION, (136) **706**, (85) 950
  - and southern *gynecologists*, **285**—*E*
- SINGULTUS: See Hiccup
- SINUSES, accessory, affections of ear, throat, *nose and*, conservation in treating, (100) 329
  - accessory, cancer of nose and, nine operative *cases*, *(71) 1927*
  - accessory, disease, *visual* symptoms of, (91) 554, (94) 1923
  - accessory, drainage *in* atrophic rhinitis, (100) 1581
  - accessory, eye disturbances *due to disease* of nose and, (99) 1667
  - accessory, infections *of*, spirochete associated with, ***1781**
  - accessory, nose *disease* of, surgical management, (134) 162
  - accessory, nose, inflammatory affections of, *in children*, (37) **696**
  - *bone* abscesses and, *tuberculous*, tuberculin in, (75) **1493**
  - *cavernosus, anatomy* of, (66) 867
  - cavernosus, of skull, *injury of*, treatment, (39) 1497
  - frontal, operation, what is *best type* of *radical*, (12) 81
  - *lateral*, septic thrombosis of left, and internal jugular vein, serous otitic meningitis with, operation *for*, (8) 479
  - maxillary, needle puncture *of*, diagnostic and therapeutic value *of*, (98) 1581
  - *posterior*, diseases *of*, and painful conditions of ear, (86) 390
- SINUSES, sphenoid, exploratory opening of, (102) 1581
  - sphenoidal, ethmoidal, maxillary and frontal, analyses of 76 consecutive operations on, (18) 865
  - Thrombosis: See Thrombosis, Sinus
- SINUSITIS, (34) 1579
  - frontal, extradural abscess complicating, (108) 1328
  - frontal, with suppuration, (78) 1927
  - treatment, (121) 1196
- SITTING-OUT bag for fresh-air classes, *new*, (75) 242
- SKIN, actinic sunlight in chronic lesions of, (40) 1187
  - action on blood-supply of brain by heat stimuli applied to, (45) 2070
  - and scalp diseases, experiences in Tripoli with, (207) 1754
  - autolysates of, of animals yielding vaccine, immunizing action of, (144) 92
  - Cancer: See epithelioma
  - corrosion from benzin, (69) 919
  - dietetics and diseases of, (96) **1334**
  - digestive disturbances as factor in diseases of, (163) 1502, (8) 1582
  - discoloration of, from gold jewelry, **1094**
  - disease and cardiovascular disturbances, (15) 1923
  - disease and cleanliness in institutions **1656**
  - disease, blood-borne, *pathogenesis of*, (159) **1198**
  - electrical operative treatments for diseases of mucous *membrane and*, (41) 1110
  - flaps, pedunculated, *from* chest to cover defects in fingers, (95) 701
  - flaps to interpose between urethra and rectum *for fistula*, (76) 163
  - germs in, pathogenic, distribution of, (46) 166
  - *grafting*, amniotic membranes for, ***973**, (100) **1029**, **1977**
  - grafting operation for cancer of *breast*, developments in, ***416**
  - grafting without *dressings*, ***1526**
  - industrial diseases of, exclusive of *so-called* trade eczemas, (153) 213
  - phenomena sometimes associated with *heart* disease, Osler's sign and, (21) 1921
  - pigmented, areas on, and pediculus, connection between, (166) 1198
  - radiotherapy of *disease of*, (73) 1025
  - rare diseases *of*, (4) **1031**
  - reaction in cancer, (34) **159**
  - reaction in exudation diathesis, (95) 1195
  - reaction in syphilis, (119) 626
  - reaction *in* syphilis, relation to Wassermann reaction, (120) 1326
  - *reaction*, luetin, in diagnosing syphilis, (146) **1329**
  - reaction to tuberculin in children, (16) **401**
  - reaction under influence of injected serum *and* colloidal substances, modification of, (104) **1842**
  - roentgenized, action of scarlet red on, (27) 865
  - roentgenotherapy *of* diseases of, abuse *of*, (39) 1665
  - serotherapy of diseases of, (63) 167
  - sterilization, *iodin for*, (142) 1197
  - sterilization with benzin, hematuria five to ten days after, (95) 1749
  - sterilization with benzin-iodin and iodin methods, (12) **1028**
  - syphilis of, acquired, classification and nomenclature of, (95) 1328
  - tuberculin test, general reaction to, (123) **952**
  - tuberculosis, diagnosis, (34) 317
  - tuberculosis, extensive, with death from pyemia, (51) 1665
  - tumors, lymphoid, multiple, (101) 1328
  - venesection plus salt infusion in disease *of*, (128) 485
- SKULL: See also Brain
- SKULL, arrest of *development* limited to scalp and, (62) 1193
  - atrophy of optic nerve with steeple and pointed, (101) 328
  - bone or periosteum flap *for* gap in dura *or*, (83) 165
  - bulging or *depression* of, congenital, with spina bifida and encephalocele, (132) 1270
  - defects in dura mater and, *to* cover, (132) 637
  - depressions, senile, (174) 488
  - development, research on, (164) 1753
  - fracture, air in cerebrum ventricles following, **1024**—ab
- SKULL fractures, depressed, of newborn infant, immediate treatment, (13) 691, (40) 1326
  - gunshot wounds, treatment, (116) 723
  - injury of venous sinuses of, treatment, (39) 1497
  - ivory exostosis of, (66) 319
  - of Descartes, **532**
  - specimens in research work on, request for, **1814**
  - surgery, emergency, **1487**—ab
  - sutures, gaping of, from brain tumor, (76) 867
- SLAUGHTER-HOUSE in India, sanitary requirements in construction of, (24) **1660**
- SLEEPINESS, (67) 85
- SLEEPING cars, steel, ventilation of, (20) **397**
  - SICKNESS: See Trypanosomiasis
- SLUDER method of tonsillectomy, (58) 338
- SMALL-POX, **919**—ab, (40) 1107
  - abortive types of, (20) 1031
  - and cholera among Turkish refugees, **222**
  - diagnosis and vaccination, series of *cases*, (47) 160
  - eruption in, rare, and probably undescribed, (27) **165**
  - holds liner at quarantine, **1472**
  - in Hamilton, Canada, **607**
  - iodin for, (17) **164**
  - serotherapy in, **380**
  - vaccination and, (57) 782
- SMITH operation and cataract, (64) 1258
  - operation for extraction of lens in capsule, (62) 165
- SMITH, Theobald, on rabies, **1646**—E
- SMOKE, effects on health and [illegible], (61) 1402
- SNAKE bite, permanganate for, (21) **323**
  - heart, [illegible] of, (25) [illegible]
- SNARE, tonsil guillotine and, new, ***650**
  - tonsil, new, ***2013**
- SNUFF habits and tuberculosis among children, **1561**—ab
- SOCIAL ethics, teaching of, relation to conservation of children, (20) 1102
  - Evil: See Gonorrhea; Prostitution; Syphilis; Venereal Diseases
  - influence of [illegible], **1090**—ab
  - legislation and [illegible], (42) [illegible]
  - organism, disease of, (121) [illegible]
  - service adapted to education, program of, **1001**—E
  - service and public health, **1025**—ab
- SOCIETY, different civilization levels in modern, (25) [illegible]
  - local, what it can do in combating venereal evil, **688**—C
  - of Clinical Surgery meets in New Orleans, **1085**
  - surgical, gynecologic and obstetric, secretaries of, **540**
- SOCKS for soldiers, (130) 478
- SODIUM and potassium injection for sciatica, (172) **560**
  - and potassium in living tissues, (42) 563
  - bicarbonate, elimination of [illegible] in simple solvents and [illegible] of, (58) 1102
  - bicarbonate, influence on acetonuria, experimental investigation, (128) 731
  - chlorid, influence on hydrochloric acid secretion by stomach, (10) **477**
  - fluorid, articles on, **1381**
  - fluorid, attenuated tubercle bacilli in tuberculosis treated with, (45) **1497**
  - glycerophosphate, **412**
  - hyposulphite, therapeutic effects of, **390**
  - iodid in small doses, [illegible] of, (57) 224
  - nitrite poisoning, (149) 521
  - salicylate, absorption of, (70) [illegible]
  - salicylate, commercial, [illegible] of, ***1137**
  - salicylate, commercial use of, **229**
  - salts for melancholia, (21) [illegible]
- SOLAR PLEXUS, stretching of, for gastric crises of tabes, (80) [illegible]
- SOLDIERS, effects of [illegible] on morals and health of, (12) 862
  - ex-confederate, [illegible] of law imposing income tax and exempting, **1246**—M
  - sick and wounded, in war, relief of, (17) [illegible]
- SOM[illegible] somatic [illegible] of, (65) [illegible]

- SOMITES, head, prootic, development of eye muscles and, in chelydra serpentina, (4) 474
- SOMNOFORM inhaler, new, (6) 1668
- SOOT deposit, daily, in Indianapolis, estimation, (14) 1184
- SORES, Bagdad, showing apparently long incubation period, (28) 1069
- SOUL, biology of, (162) 1118
- SOUND, bone conduction of, with normal hearing, (111) 635
  - duodenum, (126) 407
  - duodenum, in pylorospasm, (115) 636
- SOUTH African Institute for Medical Research, **1472**
- SOUTH CAROLINA medical news, **530, 759, 1372**
  - state board June report, **619**
- SOUTH DAKOTA medical news, **530, 1803**
  - state board January report, **1906**
- SOUTH, medicine in, history of, (69) 783
- SPANGLER'S rattlesnake-venom for epilepsy, **1001**—E
- SPASM of bronchial musculature, dyspnea from, in spasmophilic diathesis, (131) 1196
- SPASMOPHILIA in adults (182) **1753**
  - tendency to rachitis and, in twins, (116) 251
  - with repeated absences, case of, (44) 1187
- SPEAKERS' Bureau, educational work of, **1095**—ME
- SPECIALISM, dangers of, (35) 781
  - in general hospital, (25) 1980
  - pros and cons of, (9) 1324
- SPECIALIST, **453**—E
  - advertising, on Pacific coast, **1809**—P
  - in relation to general medicine, (27) 2067
  - making of, (37) 1492
  - making of, with particular reference to oculists and optometrists, (99) 1835
  - hysician in relation to, (23) 780
- ECIMENS, anatomic, preservation of, improved technic for, (110) **1931**
  - natomic, preservation of, in sugar solutions, (54) **1585**
  - n research work on skull, request for, **1814**
- ECTACLES: See Glasses
- ECULUM, improvements in, (130) 1328
- EECH Defects: See also Stammering and Stuttering
- EECH defects, (72) 477, (44) 862, (72) 1396
  - isorder, treatment, (25) **552**
  - hysiology of, (67) 1266
  - ithout larynx, ***1601**
- ENGLER'S rapid precipitation method for estimation of approximate immunity against tuberculosis, modification of, (34) 1400
- SPERMATIC CORD, torsion of, ***1783**
- SPERMIOGENESIS of Pribilof fur seal, (9) 1918
- SPHINGOMYELIN, components of, (19) 2066
- SPHYGMOBOLOMETER and energometer, (107) 1749
  - pocket, Sahli's, ***1211**
  - technic and findings, (90) 1402
- SPHYGMAMANOMETER for determining, persisting pulse in asphyxia neonatorum, (55) **1401**
  - in examinations for life insurance, additional report on, (76) 83
  - in general practice, (75) 1666
- SPICA, short, in hip-joint disease, (63) 1742
- SPIDER'S web and malaria, (18) 1837
- SPINA BIFIDA, (86) 161
  - congenital bulging or depression of skull with encephalocele and, (132) 1270
  - fascia graft to correct, (33) 1191
  - influence on prolapse of genitalia, (59) 398
  - occulta, (1) 1324
  - unusual forms of, two, (12) **1190**
- SPINAL CORD changes with progressive atrophy of spinal muscles, (90) 1672
  - complications in acute articular rheumatism, (94) 1929
  - compression, effect on albumin reaction in spinal fluid, (50) **324**
  - concussion of, and allied conditions, experimental investigation of, (13) **1983**
  - decompression, for meningomyelitis, **1392**—ab
  - degeneration, combined, subacute, (99) **698**
- SPINAL CORD disease and lead poisoning, (72) **949**
  - effusion of blood in, from indirect trauma, (140) 330
  - irrigation of, as preliminary to introduction of Flexner's antimeningitic serum, ***828**
  - lipomatosis of, sub-dural, diffuse, in infants, (29) 1665
  - Puncture: See Rachicentesis
  - section of anterolateral column, for relief of pain due to metastases pressing on nerve plexuses, ***267**
  - surgery of, (106) 1500
  - termination of, **465**
  - tumor, **1391**—ab
  - tumor, diagnosis, (55) 2070
  - tumor, extradural, removal of, **1819**—ab
  - tumor, intradural, removal, (51) 1028
  - tumor, intrathecal, removed from lumbar region of, (7) 1743
  - tumor with intermittent symptoms, (136) 1590
- SPINE, access to, through peritoneum, (98) 869
  - ankylosis of, (78) 553, (87) **1987**
  - anomalies in orthostatic albuminuria, correction of, (138) 1270
  - intestines compressed between gravid uterus and, (189) 563
  - Lateral Curvature of: See Scoliosis
  - lesion, cranium injury with, (63) 398
  - metastasis in meninges and, simulating cerebral syphilis in course of previously latent gastric cancer, (41) 557
  - normal positions of, relation to scoliosis, **1817**—ab
  - osteomyelitis of, eight cases, (42) 86
  - paralysis, flaccid, which attacked Louis Pasteur in early maturity and similarity to attack of acute epidemic poliomyelitis, (64) 1922
  - Pott's disease, abscesses in, (63) **1498**
  - Pott's disease, treatment, analysis of 116 cases, (28) **245**
  - surgery, (142) 1329
  - surgery, experiences in, (82) **783**
  - syphilitic lesions in, (121) 952
  - tuberculosis of, plaster-of-Paris in mechanical treatment of, (42) 480
  - typhoid, pathology of, (11) 940
  - vertebra, fracture of, laminectomy for, with necropsy, (149) 638
  - vertebra, necrosis of, following scarlet fever, (12) 164
- SPIROCHAETA didelphis, (105) 170
  - pallida, cultivation of, (32) **476**
  - pallida in brain in general paralysis, (43) **626, 1002**—E, (61) **1188**, (28) 1583, (75) **1586, 1650**
  - pallida in cerebrospinal fluid, demonstration of, ***108**
- SPIROCHETES and trypanosomes are parasites of lymph rather than of blood, (59) **1986**
  - antimony in trypanosome disease and, (86) 1113
  - associated with infections of accessory sinuses, ***1781**
  - in cultures, resistance of, to action of chemical and physical agents, (67) **1188**
  - in urine with syphilitic nephritis, (109) 406
  - intracellular parasite developing into, (2) 243
- SPIROCHETOSIS, (58) **696**
- SPLANCHNOPTOSIS: See also Gastroptosis; Gastroenteroptosis; Ptosis
- SPLANCHNOPTOSIS and arthritis, relationships between, (49) 1028, (20) 1105, (8) 940
  - exercises for, ***654**
  - points in, (71) 1982
- SPLEEN, abscess in, pneumococcus peritonitis with, secondary, (116) 951
  - blood-vessels, disease of, (172) 488
  - contusion of, internal hemorrhage on seventh day after, (116) 1673
  - cysts, (29) **1832**
  - enlargement, chronic polyarthritis with fever and in children, (84) 406
  - enlargement, chronic, with cirrhosis of liver and ascites, (124) **952**
  - enlargement, diagnosis of diseases associated with, (24) **781**
  - extract, Roentgen ray treated, in tuberculosis, (134) **92**
  - extract, therapeutic action of, (23) 946
  - floating, with twisted pedicle, celiotomy, splenectomy, (7) **158**
- SPLEEN leukocytolysis induced by Roentgen exposures of, curative action of, (45) 1985
  - pancreatic transplantation in, (23) **941**
  - rupture of, from slight trauma in typhoid, (66) 1586
  - rupture of liver and, operation, recovery, (36) 402
  - rupture, spontaneous, (139) 952
  - rupture, spontaneous, in malaria, (11) 316
  - rupture, traumatic, splenectomy, (10) 316
  - sarcoma, primary, (38) 81
  - surgery, (89) **1262**
  - torsion of, simulating ovarian tumor, splenectomy, recovery, (31) 1264
  - tumors in, metastatic, (169) 488
- SPLENECTOMY and splenic anemia, (4) 1264
  - celiotomy and, in floating spleen with twisted pedicle, (7) **158**
  - effect on acquired hemolytic jaundice with anemia of pernicious type (167) 1271, (81) 1987
  - in primary splenomegaly of Gaucher type, successful, (31) 1395
  - in traumatic rupture of spleen, (10) 316
  - on dog, influence of phorhizin on, (78) 1028
  - torsion of spleen simulating ovarian tumor, (31) 1264
- SPLENOMEGALY and polycythemia with plethora, (16) 1399
  - hemolytic jaundice with, (47) 398
  - pathology of, operative and autopsy material from Mayo Clinic, (90) 1262
  - polycythemia or erythremia with chronic cyanosis and, (23) 158
  - primary, of Gaucher type, splenectomy in, successful, (31) 1395
- SPLINT for fractured clavicle, (26) **781**
  - Hodgen's, for fractures, Brown's modification of, **1248**—ab
  - plaster-of-Paris, ***1620**
- SPONDYLITIS, tuberculous, treatment, (32) 1191
  - tuberculous, treatment at Leysin, Switzerland, (54) **167**
  - typhoid, in woman of 60, (50) 1746
- SPONGE, gauze, removed from bladder, another from vagina, months after a Dührssen operation for uterus prolapse, ***1879**
  - loofa, in laparotomies, (137) 637
- SPOROTHRIX, interagglutination experiments with various strains of, (36) 1106
  - synovitis, (99) 90
- SPOROTRICHOSIS, (179) **1676, *1784**
  - blastomycosis and syphilis, clinical resemblance to, occasional, ***115**
  - generalized, with multiple nodules, (89) 558
  - third case on record in Russia, (127) **1844**
  - Schenckii, ***1142**
  - Schenkii in tissues and in artificial media, morphology of, (45) 1920
- SPRAIN fracture of ligamentum patellae, rupture of, (16) 316
  - fracture of lower end of radius and juxta-epiphyseal sprain, **935**—ab
  - hot foot bath in, differentiation and treatment of, (46) 2070
  - lumbosacral, (68) 1922
- SPRUE, fungi in, (23) 787
  - pseudo, due to Flexner-like bacillus, (25) 165
- SPUTUM, abumin in, (79) **168**, (54) **1493**
  - albumin in, for early diagnosis of tuberculosis, importance of, (213) 874, (45) **1584**
  - albumin reaction in, **1481**
  - albumin reaction in, in tuberculosis, critical study, ***440**
  - blood and, in croupous pneumonia, (111) 1030
  - cultures from blood and, in lobar pneumonia, (22) **941**
  - disposal of organic wastes and, safe and clean, (26) 1395
  - examination, modern methods of, (145) 92, (47) 790, (74) 1671
  - Much technic for examination of, (59) 1332
  - phagocytosis of tuberculosis bacilli in, influence of iodid medication on, (91) **1114**
  - putrid, causes of, (92) 704
  - stain in tuberculosis, (169) **1676**
  - tuberculosis, bacillary fragments in, (117) 1749
  - tuberculosis bacilli in, bacteriologic examination of, (8) 1663
- SPUTUM, tuberculosis bacilli in, changes of shape of, (93) 1334
  - tuberculosis bacilli in, concentration method of detecting, (129) 85
- SQUILL as diuretic, special indications for, (56) **325**
- SQUINT: See Strabismus
- STABLE fly, transmission of poliomyelitis by, (38) 86
- STAIN, bacteriologic, durable, (58) 948
  - connective tissue, Mallory's, for demonstrating variation in thyroid colloid, value of, (26) **1578**
  - glandular organs, (173) 488
  - Gram's, behavior of saprophytic cocci with regard to, (16) 2066
  - intra-vitam, of tuberculous guinea-pigs with fat soluble dyes, (46) 1106
  - methyl green-pyronin section, history of, (126) 1270
  - microchemical, for fat, (133) 485
  - vital, digestion traced by, **1721**
  - vital, of tuberculosis bacillus, experiments in, (33) **476**
- STANCLEANU, intra-capsular operation for cateract after method of, (99) 1923
- STAPHYLOCOCCUS cultures to cause diphtheria bacilli to disappear from carriers, **1544**—E
  - in feces, (28) 946
  - infections, dilute sulphuric acid administered internally for, (21) **1191**
  - pyogenes aureus, bouillon culture of, in diphtheria convalescents and bacillus carriers, (58) **783**
  - spray for diphtheria-carriers, ***1876**, (23) **1919**
  - vaccine, **665, 1074, 1461**
  - vaccine therapy, improved technic, (90) 633
- STAPHYLOMA of cornea, peribulbar implantation cyst after removal of, (26) 397
- STARCH, albumin and fat-splitting ferment, excretion of, in infants, (97) 406
  - and diastase of plant tissues, (19) 318
  - digestion of, (141) 1116
  - in, diet in diabetes mellitus, (158) 92
- STATE associations do not insure against, but defend malpractice suits, **928**
  - board examinations, statistics, **1641**—E
  - board, power of, to revoke license, **157**—Ml
  - board statistics for 1912, **1623**
  - boards, should they require one or more years of college work? **933**—ab
  - care of crippled children, advantages of, (101) 1835
  - examining boards, harmony and uniformity in work of, **776**—ab
  - medical service, **531**
- STATISTICIAN, public health, (68) **160**
- STATISTICS, French, of physicians, pharmacists, midwives and dentists, **917**
  - morbidity, hospital, (93) **1180**
  - vital, and health conditions an advertising asset, **910**—E
  - vital, Austrian, **300**
  - vital, in Italy, **141**
  - vital, law in Illinois, improved, statistical studies and plea for, (50) 160
  - vital, law in Kentucky and poliomyelitis, **56**—E
  - vital law, model, committee on revision of, **2002, 2012**
  - vital, law, need for, in New Mexico, (115) 320
  - vital, legislation, progress in, **778**—ab
  - vital, morbidity reports and not, index to prevalence of disease, **463**—C
  - vital, new, **423**—ab
  - vital, of Boston, and foreign population, (8) 780
  - vital, practical value of, in South, (19) 1831
  - vital, reports, national, state and municipal, necessity for uniformity in, (15) 1831
  - vital, revision of model law on, report of committee on, **777**—ab
  - vital, two ways by which it may be made useful to health office, (18) 1831
  - vital, what they should be, **383**—ab
- STATUS Epilepticus: See Epilepsy

STATUS lymphaticus, (65) **167**
STATUTE of frauds not involved in case made by physician, **396**—Ml
STEAM sterilization, modern, ***1344**
STEAMSHIP suit, government loses, **1804**
STEATORRHEA, family, congenital, (37) **557**
STEINMANN'S nail technic, extension by Bardenheuer's technic versus, for fracture, (100) 1114
STERILITY after cesarean section, (135) 330, (62) **1402**
  and abortion in relation to ovum, (31) 402
  and defects in development of uterus, (102) 90
  artificially induced, unique case, (119) 162
  in female, as salient feature of general tuberculosis of peritoneum, (15) 556, (43) **631**
  in female without marked gross pathology, (152) **163**
  in women, theory and practice of treatment, ***93**, (210) 564
  metranoikter for dysmenorrhea and, (57) 1982
  parotitis and, (119) 1589
  produced by operations on fallopian tubes, difficulty of, (17) **1185**
  remediable cause, **1318**—C
STERILIZATION: See also Disinfection
STERILIZATION, catgut, **1904**
  hands, (178) 873
  hands, bolus alba in, (143) 1406, (51) 1585
  iodin, as now used at United States naval hospital, Norfolk, Va., (107) 1397
  olive oil, glycerin and liquid paraffin, (86) **2072**
  skin, in emergency work with special reference to benzin-iodin and iodin methods, (42) **1028**
  skin, iodin for, (142) 1197
  skin, with benzine, hematuria five to ten days after, (96) 1749
  steam, modern, ***1344**
  surgical, alcohol in, (128) 870
  surgical materials, formaldehyd fumes in, (53) **702**
  Unfit: See also Castration; Vasectomy
  unfit, (146) 870
  unfit, criminals, epileptics, imbeciles and insane, (97) 84, (62) 1834
  unfit, operation for prevention of procreation as part of penalty for crime, **779**—Ml
  women by walling off ovary with broad ligament, temporary, (92) **1748**
  women, fallopian-tube, technic of, (133) **322**
  women, tubal reimplantation as new operation for, in women, ***1221**
STERILIZER and douche-can, combination, portable, ***279**
  field, rough and ready, (32) 1669
STERNUM, fracture of, (129) 952, (188) 1754
  operations, local anesthesia for, (88) 1194
  syphilis of, ***515**
STETHOSCOPE in physical diagnosis, (8) 624
STEVENS' consumption cure, **1086**
STEWART and Ryfkogel methods in surgery of epithelioma of lip, **926**—C
STILL-BIRTHS and infant mortality, (41) 631
STIMULANTS and athletics, (85) 1402
STOFFEL'S method, spastic paralysis operative treatment by, (131) **485**
STOKES' bile media for sending cultures to laboratories, experiences with, (29) 695
STOMOXYS calcitrans in transmission of trypanosoma evansi, (112) 1836
STORAGE battery works, lead poisoning in, prophylaxis of, (98) 1841
STOVAIN-STRYCHNIN spinal anesthesia, (84) 1499
STOMACH, absorption from, **369**—E
  absorption from, reply to London, (80) 161
  acidity, perforated capsule test for, (92) **634**
  arteriosclerosis, (172) 1272
  atony and ptosis, (136) 870
  atropin in disease of, (125) **1843**
  cancer, (65) 783, (81) 1743
  cancer, analysis of 200 cases, (11) **1190**
STOMACH cancer, bone-marrow metastases and anemia in, (27) **788**
  cancer, bound chlorin in gastric juice with, (92) 1403
  cancer, cerebral syphilis in previously latent, simulated by metastasis in spine and meninges, (41) 557
  cancer, clinical and post-mortem findings in, discrepancy between, (151) 1329
  cancer, diagnosis, early, (72) 1580, (2, 69) **1982**
  cancer, dissolved albumin test for, (66) 1666
  cancer, hemophilia developing in course of, (45) 324
  cancer in cardia, transpleural resection of, successful, (101) 1500
  cancer, inoperable, extensive exposure of, to permit roentgenotherapy, (153) **1752**
  cancer, operative treatment, (46) **1192**
  cancer, tryptophan test for, unreliability of, (139) 252
  content, free hydrochloric acid in, quantitative test for, (159) **1271**
  cystosarcoma, primary, (136) 1337
  digestion after operations on, (142) **1751**
  Dilatation of; See Gastrectasis
  diphtheria of, and diphtherial onychia, (11) **1837**
  diseases, chronic, (124) 85
  diseases, methods of investigating, (23) 86
  fibroid of, with perforating ulcer, transgastric resection, recovery, (6) 396
  fibromatosis of, in relation to ulcer and cancer, **2022**—ab
  flap for plastic operation on esophagus, (118) 1038, (111) 1842
  from standpoint of general practitioner, specialists and surgeon, (40) 552
  gastric juice in cancer and nonmalignant disease of duodenum and, (19) **1924**
  gastroptosis, influence of position of stomach on certain aspects of, ***421**
  hair cast of, with gastrotomy, (33) 631
  hemorrhage and other complications in labor, (8) 699
  hemorrhagic erosions in, in connection with melona neonatorum, (65) 325
  hour-glass, (76) 1499, (49) **1926**
  hour-glass, pylorus stenosis, congenital, in infant with development of, (83) 406
  hydrochloric acid formation in, seat of, **838**—E
  hydrochloric acid secretion by, influence of sodium chlorid on, (90) **477**
  in hunger, **448**—E
  inhibitory phenomena of, **669**—E
  injury from swallowed corrosive acids, (35) **1583**
  lavage, technic for, estimation of its capacity, (109) 170
  lesions in walls of, secondary to perigastritis, (71) 1499
  malposition of large intestine and, roentgenoscopy showing, (73) 1189
  Mayr's wonderful remedy, **1175**
  motility and secretion, influence of electric stimuli on, (89) 1402
  motility in infants, roentgenography of, (1) **1576**
  motor disturbances, action of medical measures on, (218) 561
  motor functions, (70) 628
  motor functions, disturbances, (122) 699
  motor functions, influence of internal treatment on disturbance in, (81) **1748**
  motor insufficiency, influence in headache and neurasthenia, (98) 242
  moving picture of, movements, pathologic, of, (78) 792
  moving pictures of, simplified, (108) 1037
  no reflux of pancreatic juice into, in infant, (128) **1337**
  normal, **70**
  normal, of infants and pylorus obstruction, **74**—ab, (19) **317**
  operations on, local anesthesia for, (96) **483**
STOMACH perforation, diagnosis of, early, (89) **634**
  resection, (189) 1272, (132) 1405, (75) **1194**
  resection and gastro-enterostomy, indications and technic in, (20) **695**
  resection, improved technic, (56) 791, (76) 1987
  resection of transverse colon and, simultaneous, recovery in four out of five cases, (44) 1926
  roentgenoscopy and illumination of, from within, comparison of findings with, (63) 325
  roentgenoscopy of diseases of, (120) 699
  roentgenoscopy of normal, in right decubitus, (53) 1746
  rupture, bursting, of extraordinary extent, ***1535**
  sagging, with dilatation of esophagus, (208) **564**
  sarcoma, resection of, successful, (125) 329
  secretin, **1305**—E
  secretion, blotting paper capillary test for, (63) **1035**, (85) 1037, (143) **1338**, (85) 1747
  secretion, depressing influence of emotions on, (66) **1986**
  secretion during digestion, research on, (158) 1198
  secretory activity of, in chronic appendicitis with gastric symptoms, (30) **245**
  spastic strictures in duodenum and, milk differentiation of, (118) **1336**
  surgical diseases of, diagnosis and treatment of some, (47) 696
  suturing stump of intestine or, improved technic for, (139) 92
  symptoms in incipient tuberculosis, (101) 629
  tetany, pylorospasm with, cured by gastro-enterostomy, (87) 1922
  trypsin in, (119) **1843**
  tuberculosis, (75) **1267**, (108) **1500**
  tuberculosis and cancer of, partial gastrectomy performed in, (5) **1738**
  tuberculosis of intestine and, (45) 480
  tuberculosis, with extensive tuberculous lymphangitis, (44) **1108**
  tumor, non-malignant, operative removal of, (83) 1927
  ulcer, (109) 785
  ulcer and cancer, epigastric hernia with, frequency of, (34) 700
  ulcer and pylorospasm, (83) **1587**
  ulcer, callous, syphilis as factor in, (58) **1927**
  ulcer, diagnosis, (136) 485
  ulcer, experimental production of, (50) **1926**
  ulcer, indirect treatment, **1503**—ab
  ulcer, is it a frequent precursor *of* cancer? (29) 244, (15) **1919**, (8) 2066
  ulcer, hypersecretion after test meal in diagnosis of, (61) **325**
  ulcer, lymphatic diathesis predisposes to, (87) **1268**
  ulcer near pylorus, chronic, (150) **638**
  ulcer, non-surgical treatment, (50) 1395
  ulcer of duodenum and, (150) 1329
  ulcer of duodenum and, diagnosis and treatment, (68) 1982
  ulcer of duodenum and, differential diagnosis, (134) 85, (59) **1035**
  ulcer of duodenum and, gastroenterostomy of, influence on, ***881**
  ulcer of duodenum and, in relation to blood-vessel lesions, (1) **1979**
  ulcer of duodenum and, method of operative procedure employed, (152) 1329
  ulcer of duodenum and, perforated, (21) 1109, (80) 1494, (129) 1501, (32) **1832**
  ulcer of duodenum and, perforated, omentum cuff for, (103) 1403
  ulcer of duodenum and, perforated, treatment, (65) 1402
  ulcer of duodenum and, scarlet red in, **1915**—ab
  ulcer of duodenum and, secondary nature of, (151) 561
  ulcer of spastic origin, (75) **792**
  ulcer, perforated, operation for, encapsulated, suppurating chondritis following, (130) 1589
  ulcer, perforation, (125) 870
  ulcer, regional predisposition for, (120) 484
  ulcer, roentgenoscopy, (102) 1403
STOMACH ulcer, saddle, closure of posterior edges of wound margin after excision of, how to simplify and make more accurate, (91) **784**
  ulcer, surgery for, results, (42) 1579
  ulcer, surgical aspect, (74) **1742**
  ulcer without food retention, clinical analysis of 140 operatively demonstrated cases, (4) **1025**
STOMATITIS need not be expected during lactation, **616**
  ulcerative, (123) 85
STOOL: See Feces
STORM havoc and danger of epidemics, **1003**—E
STRABISMUS, convergent, concomitant, (111) 478
  convergent, concomitant, treatment, (133) 1038
  question, (46) 696
STREET car accident, typical, (109) **328**
  cleaning, elementary theory and principles of, (5) 1184
STREPTOCOCCUS arthritis in rabbits, experimental, (40) **1921**
  from milk and from human throat, statistical study of, (37) **1106**
  gonococcus and other bacteria in infective deforming arthritis and arthritis deformans, serodiagnosis of, ***1208**
  group, interrelations in, special reference to anaphylaxis reactions, (41) **1921**
  hemolytic, and puerperal septicemia, (149) **162**
  in puerperal vagina secretion, (191) 1754
  infections, chronic arthritis and therapeutic evidence of, (6) 1982
  infections, dilute sulphuric acid administered internally for, (21) **1191**
  infections of both eyes, (72) 1982
  infective endocarditis, (35) **402**
  sore throat, Baltimore epidemic of, milk-supply in relation to, (39) 398
  sore throat epidemic, source of, **51**—E
  vaccine, **1074**, **1541**
STREPTOMYCOSIS, teeth caries a, (86) 793
STREPTOTHRIX, classification of, especially in relation to bacteria, (55) 241
  infection, series of 78 cases, (28) **788**
STRIAE formation during pregnancy, factors in, **1735**—ab
STROPHANTHIN, intravenous administration of, (103) 1749
STROPHANTHUS, congenital tolerance of rat to, (36) **861**
STRYCHNIN dosage, (41) **789**, (54) 1401
  effect of digitalis and, on man, (40) **1833**
  in retention of urine in paralysis, (101) **794**
  resistance to, after castration, increased experimental, (94) **169**
STUDENTS, medical, entering army, scholarships for, **1896**
  medical, protest against new curriculum, **845**
  medical, rapid increase in number, **1240**, **1894**
  medical, societies of, meeting of, **1312**
  medical, strike of, at Halle, **141**, **459**
  university, sexual diseases among upper classmen of high schools and, **1897**
STUDY tour, medical, to America. 1912, (102) **869**
STUTTERING, intermittency in, causes of, (22) 2069
STYPTICS, fungi applied as, (5) 1108
SUBLAMIN, sublimate, hyrgolum and oxycyanid in salvarsan relapses, intravenous administrations of, (81) 864
SUBOXIDATION and uricolysis, (21) **158**
SUFFRAGETTES, militant, might be adjudged insane, **1162**—E
SUGAR, beet versus cane, (32) 324
  blood examination for, technic of, **1480**
  content of blood, **1228**—E, (96) **1672**
  content of blood and abnormally high blood-pressure, (81) 633
  content of blood and heat production, (41) 1984

SUGAR content in blood in diabetes, (93) 1403
  content of blood in exophthalmic goiter, (103) 559
  content of blood in fever, (114) 1501
  disappearance of, after removal of tumors in diabetes, ***661**
  disinfectant, sugar as local, (127) **1116**
  in heart disease, (27) **1583**
  in infant feeding, (175) **1753**
  in organism, presence and action of, (149) 1502.
  in uncontrollable vomiting in infants, (60) **1498**, (35) **1926**
  milk, amount of, in breast milk, (94) 250
  solution, infusion of, in prophylaxis of thrombosis, (77) **1840**
  solution, intravenous infusion of, to arrest hemorrhage, (101) **1841**
  solution, preservation of anatomic specimens in, (54) **1585**
  solution, proctoclysis with, in diabetes, (100) **1841**
  splitting ferment, excretion of, in *infants, (96) 406*
  tolerance in pig, (55) 318
  urine during pregnancy, significance and treatment, (25) 86
  urine, test for, (54) 1935
SUGGESTION in hyperthyroidism, limitations of, **226—C**
SUICIDE and newspapers, **1713—E**
  attempted, by Hara-Kiri method with recovery, (68) 1028
SULPHATES, ethereal, in urine, proportion of, solubility of uric acid in connection with, (158) 638
  laxative action of, **1766—E**
SULPHATID of brain, (54) 318
SULPHUR bodies of bacterial origin, bismuth salts used in media to detect formation of, (8) **1184**
  dioxid fumes, poisoning by, **1246**
SULZER, *on importance of industrial* hygiene, **452—E**
  special message on public health, **835—E**
SUNLIGHT, actinic, in chronic lesions of skin, (40) 1187
  and fresh air in schools and hospitals, prophylactic and therapeutic value of, (42) **1982**
  direct, in non-tuberculous disease, (51) **1332**
  direct, in surgical tuberculosis, (111) **484**, (152) 562, (79) 1840, (37) 1926
  direct, in therapeutics, conditions which favor application of, (49) **1332**
  direct, in tuberculous peritonitis, (53) 247, (27) 1191
  in bone disease, **1916**—ab
  in tropics, **208—E**, **284—E**
  therapy, physico-biologic cases for, (39) 1984
SUPPURATION, diffuse, around bladder, (38) **701**—ab
  gelatin in acute and chronic, **519**—ab
  resistance of arteries to, (148) 1198
SUPRARENAL CAPSULE: See Adrenal
SUPRARENAL SUBSTANCE: See Epinephrin
SUPRASPINATUS muscle, tuberculosis of, (7) 1491
SURGEONS, American College of, **1471**, **1552**
  American Physicians and, Congress of, meeting in Washington, **1311**
  barber, (9) 164, (12) 400
  death of, from blood-poisoning due to operation, **1472**
  general, and otolaryngologist, combination operations between, (64) 398
  General, annual report of, history of, with extracts, (58) 1493
  general, country, review of 2½ years' work as, (6) 85
  liability under contract to furnish services of particular, in case left to his assistant, **1730—Ml**
  national guard regimental, problems of, on maneuver campaign, (96) 478
  suit for malpractice against well-known, failure of, **1087**
  western, meeting of, **61**
SURGERY and medicine at Panama-Pacific International Exposition, **843**
  and medicine, differences between, (51) 1261
  aseptic, (126) **329**
  at David Sassoon Hospital, Poona, (20) 323
SURGERY, British Journal of, **1372**
  cathartics in, (69) 1107
  clinic of Philippine General Hospital, pathologic examinations for year from, (105) 1581
  Clinical, Society of, meets in New Orleans, **1085**
  competition in, (105) 785
  conservatism in, ***423**
  don'ts in, (28) 1033
  every-day. (119) 699
  for criminal tendencies, **368—E**
  German, (83) 1029
  Gynecology and Obstetrics and the International Abstract of, **760**
  ideals of, (71) 399
  impression of trip round world in regard to, (1) 322
  in country hospitals, (12) 2066
  lungs, experimental, (64) **1333**
  mode of access in, importance of, (44) 1331
  operative, teaching of, (68) 88
  physiologic, (119) **1673**
  practice during recent trip abroad in medicine and, (6) 322
  safety in, (132) 1030
  sheep-shears, modified, for, ***1784**
  technic, (23) 1740
  year's progress in, (31) 552
SUTURE and ligature material, ***1119**
  artery, in infected wound, successful, (151) **1270**
  bladder, after high incision for calculi, immediate, (106) **407**
  blood-vessels, technic for, (130) 870
  heart, **2024**—ab
  hernias, large, technic for, (148) 707
  necrosis of fat tissue after, (136) 330
  nerves, after-effects of, (47) 1839
  of abdomen, improved technic for, (120) 1038
  of skull, gaping of, from brain tumor, (76) 867
  purse-string, for covering stump of appendix, simple method of introducing, ***29**
  self-inverting, for appendix stump, (136) 321
  stump of stomach or intestines, improved technic for, (139) 92
  subcuticular, fixation of, (96) 783, (7) 1923
  tension, adhesive support for, ***1954**
  using two ends of, advantages in, (80) 864
  wound, technic for, (74) 249
SWALLOWING, disturbances in, from disease of larynx, relief of, (141) **486**
SWEAT, excessive, etiology and treatment, (100) 1189
  fever and pulse, relations between, (112) 951
  -glands, main regulation of heat loss by control of nervous system over cutaneous circulation and, **1794—E**
  in tuberculosis, (107) 170
SWEATSHOPS, insanitary, danger to consumers, **1712—E**
SWIMMING-TANK conjunctivitis, (79) **634**—ab
SWINDLER, Baker, arrested, **1717**, **1893**
  Maynard brought to bay, **1726—C**
  who operates through medical profession, **1717**
SYDENHAM and Harvey, work of, ***884**
SYMPHISIS, separation of, during labor, (76) 1189
SYMPHYSIOTOMY, subcutaneous, Frank's technic for, (73) **1747**
SYMPTOMS, testing of, (36) 1838
SYNAPSE, interneurotic, in disease, (7) 1836
SYNCYTIUM nuclei in blood, eclampsia in intoxication from excess of, (174) **872**
SYNESTHESIA, (33) 1920
SYNOVIA tendon sheaths, inflammation of, with concretions resembling rice, (42) **1984**
SYNOVITIS, sporothrix, (99) 90
SYPHILIS, (106) 698, (77) 1493, (105) 1667, (70) 1742
  alcoholism, tuberculosis and, (109) 1835
  annular, papular, in negro, (46) 1187, ***1420**
  aorta, (82) **1194**, (109) 1269, (129) 1270
SYPHILIS, aorta, diagnosis and treatment, (18) **396**
  arsenic poisoning during treatment of, (90) 406
  bladder, (148) 1674
  blood-serum in, hemolytic properties in, (102) 1269
  bones and joints in children, (27) 1496
  brachial plexus neuritis, symmetric, primary, as symptom of, (114) 407
  brain, recovery after use of salvarsan, ***1296**
  cerebellar hemiplegia due to, (90) 558
  cerebellar hemiplegia due to, clinical forms and diagnosis, (60) **1332**
  cerebrospinal fluid in, (56) 1746
  cerebrospinal fluid in latent, and under salvarsan, (117) 1269
  cerebrum, (107) **1500**
  cerebrum, metastasis in spine and meninges simulating, in course of previously latent gastric cancer, (41) 557
  cerebrum, prognosis and therapy of, ***1852**
  children, (86) 1743
  chorea, originating from, **63**
  clinical resemblance of blastomycosis and, to sporotrichosis, ***115**
  cobra venom test for, and Wassermann reaction, **1657**
  communication by drinking-cups, kissing, etc., (58) 944
  congenital, (134) 952
  congenital, and Wassermann reaction, (9) 238
  congenital, diagnosis of, (43) 1111
  congenital, eczema of mouth as manifestation of, (24) **1330**
  congenital, late forms of, (120) **329**
  congenital, meningococcus septicemia in young man with joint and visceral lesions from congenital syphilis, (34) 947
  congenital, salvarsan and neosalvarsan in, (185) **873**
  contagious period in, length of, *old rule still valid, (130) 560*
  contagiousness of latent, (102) 1195
  cultivation of bacillus typhosus from spot in luetic typhoid subject after fastigium, (79) 944
  deafness from, and sporadic congenital deafness, (15) 786, (13) 1190
  diagnosis and treatment, (85) **1107**
  dispensary facilities for treatment, (67) 1742
  distilled water vs. salvarsan in, (19) 1399
  ear, (14) 81, (111) 400
  economic questions related to, (109) **400**
  emetin in, **1896**
  eye, (110) 400
  fertility in parents with, unusual, (17) **1668**
  heart involvement in, symptoms and diagnosis, **1483**—ab
  hygiene of, (116) 400
  iliac artery changes in, (163) 872
  in ascendants and connection with scaphoid scapula and its syndrome, (100) 1328
  in pregnancy, incomplete forms of, *(39) 1584*
  in pregnancy, treatment, (34) **788**
  infants, newborn, mechanism of sudden death of, (82) **868**
  infants, newborn, sudden death of, (81) 868
  insanity and, **851**
  liver, hematemesis in, fatal, (28) 1109
  Lopez cure for, **1317—P**
  luetin reaction in, (53) 862, (121) 1264, (146) **1329**, ***1855**
  lung, **1915**—ab
  matrimony and necessity for specific treatment, *if* Wassermann reaction is positive, (103) 1269
  meningitis and hysteric amaurosis due to, (100) 793
  meningitis due to, rapidly developing, acute, **140**
  milk of women with, infectiousness of, (60) **1986**
  neosalvarsan in, intravenous administration, (5) 1329
  nephritis, acute, due to, soon after infection, (83) **1037**
  nephritis due to, spirochetes in urine with, (109) 406
SYPHILIS, nervous system, (127) 699
  nervous system, central, (188) 483
  nervous system, central, direct treatment, **1576**—ab
  nervous system, central, salvarsan in, (38) 1741
  nervous system, disease of, originating from, (83) 327
  nervous system in infants and children, (22) 86
  nervous system, intramuscular injection of mercury in, (79) 1667
  nose and throat, (112) 400
  otitis media due to, (66) **791**
  parasites in, found by jelly method, (4, 5) **244**
  parasites of, recently described, ***1225**
  precipitation reactions in, (150) 252
  prognosis, (140) 952
  progressive muscular dystrophy and, (46) 1982
  prophylaxis, personal, (131) 1405
  pseudohypopyon due to, (4) 789
  quantitative *precipitation in,* (63) 791
  Raynaud's syndrome and, (8) 785
  recent progress in, (18) 86
  recognition in circulatory disease, importance of, (114) 400
  reinfection with, after salvarsan, (93) 1268
  reinfection with, question of, (28) 2069
  remedies, *effect on* Wassermann reaction, (115) 400
  "Rob," (43) 1982
  salvarsan, (81) 319, (101) 478, (14) 786, (57) 1332, (25) 1740, (67) 1834, (97) 1929
  salvarsan and mercury in, (91) 242, (202) 874
  salvarsan for, in pregnant women, ***679**, *(53) 1111*
  salvarsan in abortion of, (110) 406
  salvarsan in, first 1,000 patients treated at Royal Naval Hospital at Plymouth, (13) **699**
  salvarsan in, neurorecurrence, nine cases with one fatality, (73) **326**
  secondary, nephritis with ascites, bilateral hydrothorax and general edema in, (18) 1330
  serodiagnosis, (158) 92, (79) 404, (143) 870, (64) 949, **1016**, (57) 1035, (116) 1335, (101) 1672
  serodiagnosis, applied to cerebrospinal fluid, (114) 1335
  serodiagnosis, at ophthalmic clinic, (98) 1334
  serodiagnosis, technic for, (88) 249
  serodiagnosis, with cadaver serum, (17) 1259
  skin, acquired, classification and nomenclature of, (93) 1328
  skin reaction in, (119) 636
  skin reaction in, relation to Wassermann reaction, (120) 1336
  spine, (121) 952
  sternum, ***515**
  stomach ulcer and other tumors, syphilis as factors in, (58) **1927**
  tabes dorsalis due to, **540**
  thyroid, (47) **1926**
  treatment, (128) 699, (103) 1500, (131) **1674**, (45) 1741
  treatment, combined, (93) 1114
  treatment, modern, (70) 632, (89) 1922, (50) 1982
  vascular and nervous *disease in,* (97) ***1403***
  visceral, tertiary, with *pyrexia* and extreme cachexia, probably case of, (29) 1838
  Wassermann reaction and salvarsan in diagnosis and treatment of, in ear, nose and throat affections, special reference to auditory nerve, (11) 81
  Wassermann reaction in *prophylaxis of, in general, (91) 959*
  Wassermann *reaction in relation to diagnosis and* treatment of, (80) 1189
  Wassermann reaction showing results of treatment, (50) 398
  Weil test for, with cobra venom, technic of, **1247**
SYRINGE and gravity method for intravenous injection *of* salvarsan, combined, ***824**
  one-hand, (133) 330
  rented instead of sold outright, (150) **871**
SYRINGOMYELIA, (77) 1189
SYRUP cocillana compound, **537—P**, **526—E**
  of lactucarium, Aubergier's, **538—P**

SOCIETIES

Acad.—Academy.
Am.—American.
A.—Association.
Conf.—Conference.
Cong.—Congress.
Conv.—Convention.
Internat.—International.
M.—Medical, Medicine.
Phar.—Pharmaceutical.
S.—Society.
Surg.—Surgical, Surgery, Surgeons.

Ala. State M. A., **1368, 1387**
Am. A. for Cancer Research, **2019**
Am. A. for Promoting Hygiene and Public Baths, **1717**
Am. Climatological A., **1717**
Am. Gynecological S., **226, 1733**
Am. Laryngological A., **1717**
Am. M. Coll. A., **391, 858, 931**
Am. Neurological A., **1818, 1909**
Am. Orthopedic A., **1817, 1916**
Am. Phys. and Surg. Cong., **1568, 1660**
Am. S. of Tropical M., **1820**
Am. Surg. A., **2022**
Am. Therapeutic S., **1913**
Ariz. M. A., **1801**
Ark. M. S., **1802**
British M. A., **607, 1805**
Cal. State M. S., **1368**
Chicago Surg. S., **935**
Conf. on Infant Mortality, **1804**
Conf. on M. Education, Legislation and Public Health, **391**
Conn. State M. S., **1802**
Federation of State Licensing Boards, **391**
Fla. M. A., **1713**
French Cong. of Gynecology, Obstetrics and Pediatrics, **1372**
Ga. M. A., **1368, 1731**
German Conv. on Internal M., **1720, 1806**
German Surg. A., **1312, 1374, 1473**
Internat. Cong. on Physiotherapy, **1553, 1650, 1720**
Internat. M. Cong. **1372, 1649, 1718, 1804, 1893, 1903, 1970**
Ia. State M. S., **1714**
La. State M. S., **1487**
Md. M. and Chirurgical Faculty, **1369**
Miss. State M. A., **1390, 1484**
Mo. State M. A., **1648**
Mo. Valley M. S., **1101**
Mont. State M. A., **1714**
National A. for the Study and Prevention of Tuberculosis, **1570**
National Drainage Congress, **1471**
Neb. State M. A., **1648**
New England Pediatric S., **74**
N. H. M. S., **1715**
N. J. Pediatric S., **74**
N. Y. Acad. of M., **152, 1182, 1911**
N. Y. Acad. of M., Section on Pediatrics, **74, 547**
N. Y. Co. M. S., **1250**
N. Y. Neurological S., **1023, 1396, 1575**
N. Y. State M. S., **1483, 1572**
N. C. M. S., **295**
N. Dak. State M. A., **1550, 1715**
Okla. State M. A., **1716**
Peking M. Conf., **1820**
Philadelphia Coll. of Phys., **395, 858, 1022**
Philadelphia Co. (Pa.) M. S., **473**
Philadelphia Pediatric S., **74**
S. C. M. A., **1372**
S. Dak. State M. A., **1803**
Southern Surg. and Gynecological A., **71, 150, 236**
Tenn. State M. A., **1248**
Tex. State M. A., **1649**
Western Surg. A., **198, 237, 314**
W. Va. State M. A., **1804**

T

TABANUS, genus, 3 new African species of, (3) 401
TABES DORSALIS, **112**—T, (58) 1922
abortive forms of general paralysis and, (91) **1930**
and other parasyphilitic conditions of nervous system, early signs of, (77) 1667
atypical forms of general paralysis and, considered in light of serodiagnosis, (71) 241
blood-serum in, hemolytic properties of, (102) 1260
TABES DORSALIS, Frenkel treatment in, **927**
gastric crises of, (99) **1114**
gastric crises of, pathogenesis of, (40) 1579
gastric crises of, rhizotomy for, (18) 239, (147) **561**, (62) **1111**, (57) **1192**
gastric crises of, stretching solar plexus in, (80) 1840
fracture of patella in, (32) **166**
in young, (123) **1336**
juvenile, case of, (22) 1264, **1819**—ab
knee affection due to resection for, (206) 1754
monosymptomatic, (140) 243
pain in, diagnostic significance of, (60) 863
re-education of muscles in, (142) **252**, (85) **634**
spirochetes in central nervous system in progressive paralysis and, (75) **1586**
stomach disturbances in, (2) **1025**
syphilis cause of, **540**
without lymphocytosis, (75) 1262, (31) 1496
TABLE, operating, for rhinologists, *1951
operating, for use in animal research, (16) 1104
orthopedic, and fracture, *1850
TACHYCARDIA, high speed of auricles did not produce, (36) 556
paroxysmal, (80) 89, (42) 324, **748**—T, **1249**
paroxysmal, atrioventricular, mechanism of heart action in, (81) 249
TADPOLES, sterile, (33) 1330
TAENIA nana, infection with, (10) 940
saginata with v-shaped proglottides, **1821**—ab
TALIPES, (162) 479, (120) 1501
causes of outward bending of ankle and, (98) 1114
in young children, treatment, (15) 865
non-operative treatment, (100) **1115**
operative treatment, (147) 330, (108) 1588
painful, treatment, modern, (85) 2072
positive support in curative treatment, importance of, **1916**—ab
treatment, (43) 477, (143) **1329**
valgus, congenital, tendon transplantation for, (5) **1491**
valgus, pathogenesis of, (195) 873
TAMPON drainage of abdomen, indications for and results, (145) 870
TAPEWORM, eradication of, **809**
TAR, gas-works, epithelial proliferation induced by injection of, (43) **86**
TARIFF changes on drugs and surgical instruments, proposed, **1382**—ME
on surgical instruments, **1322**—ME, **1726**—C
TARSUS, mediotarsal subluxation as shown by roentgenogram, (33) 81
TARTAR emetic in venereal ulcerating granuloma, (147) **1406**
TATTOOING and erysipelas, (111) 1930
of cornea, accidental, by piece of lead from copying pencil, (91) 1581
statistical observations on, seen by recruiting surgeon, (157) 479
TEBESAPIN, tests of, unfavorable outcome of, (88) 704
TEETH and disease, (80) 319
at birth, (49) 1746
care of, in army, (143) 455
care of, in school, (115) 794
caries a streptomycosis, (86) 793
caries and general pathology, (54) 1034
caries and school inspection, (57) 696
development of, and occlusion as factors in development of face bones, (108) 161
extraction of, local anesthesia for, improved technic, (59) 1746
eyes in relation to, (123) 478
feeding in relation to, (40) 696
growing in nasal fossa, (55) 862
in relation to body, (53) 696
lung tuberculosis in relation to, (38) 631
mal-occlusion of, (109) 161
permanent, Roentgen-ray measurement of, before eruption to provide for early regulation of dental arch, (110) 161
TEETH, prophylaxis, (41) 696
TEETHING cause of disease in infants, (76) 944
period, (179) 1272
TELEPHONE exchange, physicians', **1162**—E
TEMPERATURE, abnormal, (30) 2067
influence of diathermia on, (41) 2070
moderately high, effect on infant, (26) 1260
of children, (119) **870**
rectum and axilla, comparison of, (47) **2070**
seasonal, and seasonal diseases, (7) 1184
technic for taking, (145) **486**
TEMPORAL BONE and its anomalies in infant at birth in 150 cases, (36) 1326
infant, and mastoid operation, (37) 1326
TENACULAR, tonsil, constructed on principle of double-tined corkscrew, (111) 161
TENDON contractures, tenoplasty in, **539**
fiber, occlusion of large bloodvessel with strip of, (99) **793**
fixation, (13) 1104
regeneration, (43) **1187**
synovial, sheaths, inflammation of, with concretions resembling rice, (42) **1984**
transplantation for congenital talipes valgus, (5) **1491**
transplantation operations, (132) **321**
TENDOVAGINITIS with stenosis at styloid process of radius, operative cure of, (196) **488**
TENEMENT legislation, unwise, **146**—C
model, is it a failure? **52**—E
TENNESSEE medical news, **217, 759, 1236, 1649, 1803**
TENOPLASTY in contractures of tendons, **539**
TENSOR tympani muscle, volitional contraction of, (51) 2070
TERATOMA of jaw, upper, (71) 1333
of unusual size affecting testicle of horse, (18) 1399
on back of head, (53) 1266
ovary, removed at age of 50, (55) 1332
thyroid in fetus, (22) **1033**
TEST: See also Reaction
TEST, aceto-acetic acid, simple, new, (39) **1669**
acetone and diacetic acid, bedside, (48) 1034
acid, in therapeutics, (44) 1982
agglutination, macroscopic, for detecting fowls that are harboring bact. pullorum, value of, (56) 1187
atropin, pilocarpin or epinephrin, for autonomic nervous system in children, (121) 1931
blood coagulability, (157) **562**
blood-cryoscopy for determining kidney function, practical value of, *188
blood in feces, (100) 1334
blood, quantitative, (91) 1403
blotting-paper, for acidity of gastric juice, (63) **1035**, (85) 1037, (143) **1338**, (85) 1747
breakfasts, comparison of, (116) 407
Burnam, for formaldehyd in urine, *662
Burnam, for formalin excretion in urine, accuracy of, (32) **1740**
chemical, of serous fluids with uranium acetate, (143) 92
colorimetric, for determination of epinephrin, new, (57) 318
colorimetric, for determination of uric acid in blood, new, (56) **318**
copper sulphate, for urobilin, (86) 1037
Einhorn bead, for estimating digestion, (89) 1494
ferment, simple, of liver functioning, (144) **638**
for differentiating cortical and subcortical motor aphasia, unreliability of, (65) 1746
for feeblemindedness among immigrants, **908**—E
for invisible writing, (160) 1502
for latent nephritis, induced albuminuria as, (120) **952**
functional, of heart, (13) 780
functional, of internal ear, (50) 1985
TEST, hydrochloric acid in stomach content, quantitative, (159) **1271**
indol, determining small amounts of, (158) 1271
inoculation, in tuberculosis, improved technic for, (81) 792
kidney function, (114) 328, (18) 780, (36) 781
kidney function, indigocarmin as, in chromo-urethroscopies, results of 200, *185
kidney function, phenolsulphonephthalein for, (57) **83**, *191, (192) 873, (110) 1269, (112) 1336, (39) **1492**, **1561**—ab, (39) 1492, **1561**—ab
kidney function, phenolsulphonephthalein, negative results with, (10) 624
kidney function, technic for, (121) **1673**
liver function, (14) 780
luetin, in diagnosis of syphilis, (53) 862
luetin, technic of, **852**
meat-digestion, Schmidt's, (60) **1035**
medicolegal, for poisonous alkaloids, (77) 1036
milk sediment, **53**—E
Much-Holzmann for psychosis, **1813**
Noguchi butyric acid, **1813**
occult blood, chemical, (78) 1327
palmin, Ehrmann's, for pancreas functioning, **1487**—ab
v. Pirquet, diagnostic value of, (4) 2066
potassium iodid in urine, original, *1621
Rinné, Weber and Schwaback, prognostic value of, (82) 477
saccharose, alimentary, for infants, (36) **1191**
Schmidt's nuclei, of pancreas functioning, (142) **1117**
stomach acidity with perforated capsule, (92) **634**
sugar in urine, (54) 1985
tebesapin, unfavorable outcome of, (88) 704
tryptophan, for stomach cancer, unreliability of, (139) 252, **907**—E
TUBERCULIN: See Reaction, Tuberculin
urea in urine, rapid, clinical, (92) **1327**
uric acid in urine, (78) 161
uric acid, rapid, **1957**
urine, for breast-milk feeding, (75) 1986
urine, Salkowski and Kojo, for diagnosis of cancer, (80) 1499
urochromogen in urine, **689**, (141) **871**, **928**, (125) **1589**
Weil cobra venom, **1657, 1813**
Weil, cobra venom, technic of, **1247**
TESTICLES, atrophy of, after parotitis, (145) **252**
cancer, (185) 488
cancer, radical operation, (41) 402
chorion-epithelioma of retained, with multiple metastatic growths, (30) 1838
disease of thyroid, hypophysis and, simultaneously, (123) 1589
epithelium of urethra and, beware of injuring, (66) 558
in perineum, (93) 559
rabbit, influence of certain infections on, (87) 1672
resection, experimental, (98) 170
secretion, internal, experimental research on, (203) 1754
surgery, conservative, (92) 559
teratoma of unusual size affecting, in horse, (18) 1399
torsion of funiculum of retained, (208) 1754
tuberculosis of, bilateral, (33) 781
tuberculosis of, tuberculosis bacilli in urine with, (88) 1268
tuberculosis of tubules of, primary, (67) 632
tumors of epididymis and, (84) 1834
tumors of kidney, adrenal and, embryogenetic relationships of, **236**—ab, (26) **1325**
undescended, (55, 69) **1927**
undescended, Bevan's operation for, (39) 81
undescended, Davison's operation for, (66) 944
undescended, endothelioma of, in male pseudohermaphrodite, (26) 1264

TESTICLES, undescended, hernia complicated with, (56) 160
  undescended, pathology of, (72) 1333
  undescended, treatment (69) **1499**
TESTIMONY, expert, report of committee on, **777**—ab
  medical, expert, and medical experts, (73) 1742
TETANUS, (35) 2067
  antitetanic serum in, (81) 1262
  epinephrin in diphtheria and, (26) **1926**
  from gelatin, **1866**—E
  intravenous injections of paraldehyd and copious injections of normal salt in, (27) 556
  local, (109) **484**
  magnesium sulphate for, (75) **1036**, (15) 1982
  prophylaxis and therapy of, (137) 243
  serotherapy in, after symptoms have developed, ***363**
  serotherapy in prophylaxis of, (111) 794, (114) **1196**
  serotherapy in, successful, incubation fifteen days, (116) 794
TETANY from obstetric-gynecologic point of view, (76) **1747**
  in acute suppurative appendicitis in adult, (19) **1668**
  irritability of nerves, excessive, in, (123) 1115
  stomach, pylorospasm with, cured by gastro-enterostomy, (87) 1922
TETRAGENUS septicemia, (80) **1987**
TEXAS medical news, **296**, **457**, **530**, **915**, **1237**, **1551**, **1649**, **1804**
  state board June and November reports, **311**
EOBROMIN sodium salicylate in acute experimental nephritis, therapeutic value of, (6) **1979**
ERAPEUTIC points, (64) 87, (29) 324
ERMOCAUTERIZATION in hemophilic hemorrhage, (108) **1931**
ERMOMETER, aseptic, **1902**
  linical, as vehicle of infection, **1467**—E, **1560**
IERSCH flap for closing gap in urethra, (91) 249
  rafts, safety-razor to cut, **1245**—C
  rafts, thickening of, excessive, due to component of scarlet red, (28) **1980**
IGH, gangrene of entire, and retroperitoneal rupture of appendix with extravasation into, ***1782**
IOCOL and syrup thiocol, Roche, **1974**—P
OMSEN'S DISEASE: See Myotonia Congenita
ORACOSCOPY findings in 71 cases, (68) **249**
ORAX, defective development of, (165) 1753
  eveloping of, in prophylaxis of gynecologic disease, importance of, (64) 482
  iagnosis of disease of, before percussion and auscultation were invented, (41) 1838
  iseases which are amenable to surgical intervention, surgical aspects of, (95) 1581
  intrathoracic surgery, literature on, **928**
  operations, technic of, (96) 1581
  pressure in, negative, (95) 1403
  resection of wall of, under insufflation anesthesia, (87) 1037
  roentgenoscopy of lesions, (117) 1836
  salicylic acid applied to, in pneumonia, (107) **794**
  slanting upper aperture of, (177) 488
  surgery, (55) 166, (112) 698
  tumors, (97) **1581**, (82) 1671
  tumors, malignant, primary, diagnosis, (1) 1923
  visual inspection of conditions inside abdomen and, direct, (68) **249**
  wedge resection of ribs to reduce size of, in lung tuberculosis, (165) **487**
THOREMEDIN, **462**—P, **687**—P
THORIUM-X, chemical action of, on uric acid and other organic substances, (54) 404, (72) 1035, (78) 1193
  duration of therapeutic action of, (103) 90
  in anemia, leukemia and rheumatism, (82) 1113
  in pernicious anemia, (55) 404, (49) 944
  nfluence on seedlings, (113) 1196
THORIUM X, research on, (121) 1749
  therapy and radium, (81) 477
THREADWORMS: See Oxyuris Vermicularis
THROAT and its value to general practitioner, (81) 1580
  chloroform anesthesia in surgery of nose and, eight years of, (68) 628, (30) 861
  hemorrhage, fatal, (3) **864**
  in prophylaxis of tuberculosis, **1504**—ab
  journals on nose, eye and ear, **1320**
  membranes and membrane formation in nose and, (61) 477
  minor operations on nose, ear and, (137) 1590
  nasal obstruction causing diseases of ear and, (39) 781
  neuroses of mouth and, (27) 317
  nose and, (54) 1395
  nose and ear, affections of, including accessory sinuses, conservation in treating, (100) 320
  nose and ear work in general practice, (37) 1110
  operations, after-treatment, (20) 165
  pathology of, its importance for organism as a whole, (108) 1115
  pneumococcus infection of, three fatal cases, (25) **1899**
  reflexes of nose and, causing cough, (28) 861
  sexual apparatus in connection with ear, nose and, (112) 1030
  sore, and diphtheria, (130) 699
  sore, epidemic, streptococci in, source of, **51**—E
  sore, septic, epidemic (90) 1922
  sore, septic, epidemic in Concord (N. H.), January, 1912, (48) 1920
  sore, streptococci, Baltimore epidemic of, milk-supply in relation to, (39) 398
  specialist, ethical problems confronting, (111) 1189, (107) 1328
  streptococci from milk and human, statistical study, (37) **1106**
  surgeon, needs of, in general hospitals, (146, 152) **1030**, (15, 48) 1395, (82) 1580
  syphilis of nose and, (112) 400
  Wassermann reaction and salvarsan in diagnosis and treatment of syphilis in affections of ear, nose and, special reference to auditory nerve, (11) 81
THROMBOPHLEBITIS in typhoid, symptomology of, (18) **158**
  of external iliac vein, ***1523**
  pelvic, septic, (7) **396**
  postoperative, (13) **625**
  puerperal, (8) **158**
  puerperal treatment, **1737**—ab
THROMBOSIS and embolism after appendicitis operations, (96) **869**
  and embolism after gynecologic operations, (64) **1928**
  in malformed portal vein, (149) 561
  meningitis following operation for bilateral pansinusitis, recovery, (99) 1581
  pelvic, puerperal, exploratory laparotomy, ligature of left common iliac vein, (17) 556
  septic, of left lateral sinus and internal jugular vein, serous otitic meningitis with, operation for, (8) 479
  sinus, afebrile, and cerebellum abscess complicating acute otitis media in adult, (87) 399
  sinus, and brain abscess, differential diagnosis between, treatment, (73) 242
  sinus, cavernous, (35) 1110
  sinus, cavernous, of otitic origin, (37) 943
  sinus, lateral, primary, without involvment of mastoid process or tympanum, (22) 81
  sinus, operation, recovery, (108) 320
  sinus, with purulent meningitis, (32) 781
  splenic vein, (88) **1114**
  structure of, (123) 91
  sugar solution in prophylaxis of, (77) **1840**
  vena cava, inferior, case of, ***1878**
  vulva and vagina, and hematomas, (40) 1584
THUMBS, congenital absence of both, (31) 787
THYMECTOMY, (1) **550**, **1474**
  in exopthalmic goiter with myasthenia, (150) **561**
THYMOL in liquid petrolatum, prescribing, **1814**
THYMUS: See also Goiter; Status Lymphaticus
THYMUS, (82) 1834
  and combination of thymus-hyperplasia with goiter, (96) 1923
  as leukocyte producing organ, (64) 167
  death and thymic tracheostenosis, ***571**
  death in newborn infant, **1022**—ab, (5) 1831
  elements of, (113) 251
  enlarged, trachea displacement by, (105) 559
  function, (19) 1324
  histology, (1) **1184**
  hyperplasia and intrathoracic goiter, Roentgen ray in, ***117**
  Roentgen rays, action of, on thymus, in dog, (54) 247
  roentgenotherapy of, enlargement of, (48) 247
  shriveling of, in six dogs under Roentgen ray exposures, (92) 89
  surgery, (1) **550**
  with exopthalmic goiter, (99) 869
THYREOGLOBULIN, iodin-containing complex in, nature of, (75) **1028**
THYROID: See also Goiter; Parathyroid
THYROID, adenomas of prostate and, growth centers of benign blastomata with special reference to, (45) 627
  and gastro-intestinal toxemia, (20) **1983**
  bone tumors originating in, (95) **869**
  cancer, effects of iodin in, (19) 1259
  cancer or papilloma of, (61) 1927
  colloid, Mallory's connective tissue stain for demonstrating variation in, value of, (26) **1578**
  disease of testicles, hypophysis and, simultaneously, (123) 1589
  embryologic, anatomic, histologic and clinical facts concerning, practical application, (121) 699
  epithelial tumors of, benign, (44) 627
  evolution of, (32) 1665
  exopthalmic goiter and relation to, (77) 697
  exophthalmic goiter, histology of, (73) 1402
  extract, effectual in retraction of palmar aponeurosis, (33) 700
  extract in myxedema, thirteen years of, (61) **1266**
  fetal iodin and phosphorus contents, size and physiologic activity of, (46) **1665**
  giant cells in prostate and, (119) 1270
  grafted into spleen or tibia in children with congenital myxedema, (121) **1405**
  hard tumefaction of, after partial thyroidectomy, (72) 1402
  headache originating in, (138) 1338
  hyperplastic, nematodes in, of dogs, **2022**—ab
  hyperthyroidism and, (114) **85**
  in epilepsy, (52) **1034**
  influence of artificial stenosis of trachea on, (75) 1333
  influence on blood-pressure, (35) 1838
  insufficiency, some types of, (61) 83
  iodin content of, **1000**—E
  idoin content of, seasonal variation in, (63) **819**
  laryngotracheal manifestations of disease of, (104) 1328
  lymphatic foci in, (164) 872
  operations, 103 consecutive, (92) 864
  origin of hemorrhagic uterus disease, (104) **1930**
  preparation containing, **384**—P
  removal of, under local anesthesia, (31) 1031
  sarcoma of, and coexisting infection, **316**—ab, (23) **1825**
  secondary changes in, (38) **947**
  secretion, perverted, and exopthalmic goiter, high-frequency electricity in, (1) **694**
  superior, ligation of, for goiter under local anesthesia, (107) 1189
  surgery of, special reference to exophthalmic goiter, (17, 25) 1109, (17) 1191
  syphilis of, (47) **1926**
  teratoma of, in fetus, (22) **1033**
  tuberculosis, ligneous, (70) **1499**
  tumors, mestastatic, nature of, (12) **551**
THYROIDECTOMY, partial, hard tumefaction of thyroid after, (72) 1402
THYROIDISM and clinical significance of its perversions, (41) 1492
  and tuberculosis, (140) **871**
TIBIA, fractures of lower end of, in children, (87) 558
  fracture of upper end, (47) 166
  fractures, spiral, treatment, (19) **1920**
  Schlatter's disease of, (62) **702**
TIC DOULOUREAUX of inferior dental nerve, operative treatment, (62) 696
  peripheral branches of fifth cranial nerve in, new method of dealing with, (48) **1028**
TICK bite in British Columbia, (49) 160
  new species of, (153) 92
TINNITUS aurium, (61) 160
  aurium, determining factors in, (105) 1328
  aurium, significance in certain diseases of ear, (131) 162
  efficacy of atropin in, (125) 91
  nitrate of silver applied within eustachian tube for, (19) 81
TISSUE, action of light on, (100) **407**
  and blood analysis, protein metabolism from standpoint of, (31) 626
  bacillus abortus, persistence of, in inoculated animals, (34) 1981
  celloidin-paraffin method for embedding and handling, (64) **1262**
  cells, deported, as possible source of cancer, (113) 90
  connective, artificial activation of growth in vitro of, (46) 240
  connective, constitutional inferiority of, (152) **1752**
  connective, permanent life of, outside organism, (24) **942**
  connective, stain, Mallory's, for demonstrating variation in thyroid colloid, value of, (26) 1578
  cultivation, in vitro, (165) 872
  desiccated, protein extraction from, by aqueous solvent, rate of, (86) 1327
  destruction, desiccation process of, as applied to certain pathologic conditions, (86) 864
  drying fluids and, new method, (30) **626**
  growth, Dr. Carrel's study on influence of tissue juices on, **210**—E
  life of, outside organism from embryologic standpoint, **1660**—ab
  life of, outside organism from pathologic standpoint, **1661**—ab
  life of, outside organism from physiologic standpoint, **1661**—ab
  living, colloids in, (178) 1272
  living outside organism, (63) 482, (102) 705, **1560**
  living, why not digested by gastric juice, (61) 132
  manganese in, in vertebrates, molluses, insects, etc., (24) 1925
  morphologic changes in, with change in environment, (50) **1187**
  nerve growth outside of organism, (90) 89
  sporothrix Schenckii in artificial media and, morphology of, (45) 1920
  subcutaneous, calcification, multiple, in, (1) **1189**
  transplantability of, to embryo of foreign species, (47) **1261**
  transplantation, **238**—ab
TOBACCO, angina pectoris due to, **1473**, (30) 1583
  Benjamin Rush, pioneer investigator of effects of alcohol and, on man, (92) 1581
  chewing and snuff habits among children, **1561**—ab
  cigaret and, **617**
  effect on heart, **828**—T
  poisoning by, fatal case, (20) **941**
TOE, injuries of, and insurance against accidents, (118) 1196
  substituted for finger, (113) 1037
TONGA compound, elixer of, **1478**—P
TONGALINE, **1466**—E, **1477**—P, **1478**—P
TONGUE, cancer, (18) 1264, (14) **1399**
  cancer, under age of 30, (85) **1500**
  fibro-angioma (39) 943
  mouth and, in disease, **147**
  mucous membrane disturbances of mouth and, in pernicious anemia, (103) 698
  tumor of mouth and, malignant, (105) **1029**
  vaccine pustule on, (70) 326
TONSIL and adenoid, (61) 696, (101) 698, (85) 1743

TONSIL and adenoids in children, cause of, and lymph-node extract for, (6) 2067
and adenoids, operation, lesson from case of, (137) 162
and adenoids, treated without operation, (5) 2067
and adenoids, treatment, (36) 1110
catarrh, chronic, from enlarged, (115) 407
clamps, new, ***2044**
dissector, new, (136) 162
enucleation and removal of adenoids under gas anesthesia, (15) 1399
grasp, new, and mouth gag with permanently attached tube for continuous etherization, (111) 1328
guillotine and snare, new, ***650**
hemostat, Corwin's, (113) 1328
operations on, significance of anomalous internal carotid artery in, ***172**
pharyngeal, (78) 1834
preserving integrity of contiguous structures when operating on, importance of, ***439**, (29) 861
removed in treating tuberculous lymph-nodes in neck, necessity for, (156) **1752**
removing adenoids and, simple and satisfactory method for, (67) 1922
snare, new, ***2043**
surgery of, modern, (135) 162
tenacular, improved, constructed on principle of double tined corkscrew, (111) 161
typhoid bacilli on, (84) **1195**
TONSILLECTOME, new, *827, ***1620**
TONSILLECTOMY, *742, (93) **1588**
by alveolar eminence of mandible, ***650**
hemorrhage after, serious, (161) **1271**
results of, (117) 1328
Sluder method of, (58) 398
technic for, (90) 1037
TONSILLITIS and acute rheumatism, (183) **1676**
and adenoids in relation to other diseases, (40) 477
autogenous vaccine therapy in epidemic of acute arthritis and, **1813**
chronic, (114) **636**
pharyngeal, acute and subacute, **1487**—ab
treatment, (39) 1187
TONSILLOTOMY and tonsillectomy, remote results of, (22) **865**
TOOTH-PLATE impacted in esophagus 2½ years, removal through mouth, (38) 402
TORTICOLLIS, (64) 83
acute, rheumatic orchitis, acute, associated with erythema nodosum and, in child of 2½ years, ***1608**
spasmodic etiology of, ***1421**
spasmodic, tonic-clonic, (47) **1331**
TOURNIQUET for intravenous work, new, (126) 162
TOXEMIA from alcohol, (126) 1030
gastro-intestinal, (4) **1190**, (18) 1191, (22) 1837, (18, 30) 1983
gastro-intestinal, and thyroid, (20) **1983**
gastro-intestinal, consequences and treatment from surgical viewpoint, (7) 1190
gastro-intestinal, skin indications of, (8) 1582
gastro-intestinal, symptoms and treatment, (6) **1190**
pregnancy, (9) 322, (1, 2) **1031**, **1227**—T, (17) 1324
pregnancy, new method of treating, (107) **320**
pregnancy with convulsions, treatment, conservative, (45) 1028
with asystolia, (82) 1499
TOXICOLOGY, physical constants in, (2) 1108
TOXINS, action of serums and, administered by rectum, (111) 1749
in expired air, experimental research on, (168) 1271
of aqueous extracts of organs, action of serum on, (110) 90
reactions of, **1095**
soluble, preservation of, technic for, no impairment of properties after 7 years and 4 years, (44) 866
TRACHEA displacement by enlarged thymus, (105) 559
stenosis, artificial, influence on thyroid, (75) 1333
stenosis of larynx and, chronic treatment, (46) 1533
stenosis, resection of tuberculous lymph-nodes at bifurcation to relieve, (68) 1935
TRACHEA, stenosis, thymic, and thymus death, ***571**
stenosis, thymic origin, (76) 1333
TRACHEOBRONCHOSCOPY for removal of foreign body, (45) 1395
in diagnosis and treatment, (117) 1668
laryngoscopy and esophagoscopy, direct, (26) 401, (13) 786
TRACHEOTOMY, emergency, (140) 560, (69) 791
TRACHOMA, **1538**—T
blastomycetes in conjunctivitis resembling, (80) 326
blindness in relation to, (137) 478
bodies, conjunctiva affections associated with, clinical course of (29) 397
changes of plica semilunaris conjunctivae and conjunctiva sclerae, clinical and pathologic histologic study, (23) 165
immigrant and, dangers to America, (19) 1980
in United States, prevalence of, **2007**
problem, (68) 1188
prophylaxis and therapy, ***588**
report on, **2004**
surgical treament, (144) 243
with special reference to state of Minnesota, (41) 1187
TRADE-UNIONISM and medical profession, **1166**, **1238**
TRANSDUODENAL lavage, ***586**
TRANSFUSION, blood (98) **250**, (32) 317
blood, after obstetric hemorrhage, (34) **245**
blood, cannula for, ***1284**
blood, simple method of, ***435**
hemolytic and agglutinative, experimental, (38) 1981
TRANSMISSION, disease, limitations of specificity in, **675**—E
of recurrent fever by louse, **1647**—E
TRANSPLANTATION: See also Grafting
TRANSPLANTATION and grafting of bone, (109) 1263
autoplastic, into gastro-intestinal tract, gall-bladder changes following, (50) **1187**
bone, nose entirely restored by rhinoplasty and, ***728**
bone or periosteum flap for gap in skull or dura, (83) 168
bone, osteomyelitis with, ***2030**
fat, (92) 483
graft, without periosteum, successful, ***1533**
intestine, artificial vagina by, (104) 242
of piece of cartilage into septum to prevent perforation after submucous resection, (82) 399
of tissues to embryo of foreign species, (47) **1261**
of tumor of fowl producing cartilage and bone, (46) **1261**
pancreatic, in spleen, (23) **941**
peritoneum flap, (147) 707
quadriceps, in paralysis, (34) **781**
rib cartilage into pedunculated skin flaps, experimental study, (34) **1325**
spinal bone, and bone growth, experimental study, ***1044**
tendon, for congenital talipes valgus, (5) **1491**
tendon, operations, (132) **321**
tibial bone, in postoperative mastoid wound, (49) **862**
tissues, **238**—ab
toe substituted for finger, (113) 1037
TRANSPOSITION, large blood-vessels, (159) 1675
viscera, complete, ***1296**
TRAUMA, abdomen, differential diagnosis in, (81) 1834
and bone tuberculosis, **1917**—ab
and lung tuberculosis from medicolegal point of view, (35) 398
effusion of blood in spinal cord from indirect, (140) 330
in connection with tumor growth, (132) 1590
neurosis due to, **1393**—ab, (23) 2067
neurosis due to, dragging through 18 years' litigation for damages, (57) **1986**
TRAVOIS, new, addition to equipment of ambulance companies, (114) 242
TRAXO and fruitola, **1016**
TREMORS, anomalous, **1024**—ab
TRENDELENBURG position, anesthesia and, ***1273**
TREPHINE, scleral, new, ***2045**
sclerocorneal, ***1537**
TREPONEMA calligyrum, cultivation of, from condylomata of man, (54) **241**
in tropical sore, (151) 1406
Pallidum: See Spirochaeta Pallida
TREVES, fatal peritoneal folds of Jonnesco, Reid and, relation to Jackson's membrane and Lane's kink, (77) **1396**
TRICHINOSIS, (18) 1492
articles on, **1175**
trichocephalus treatment for, **1174**
TRICHOSTRONYGYLUS colubriformis a human parasite, (21) 1669
TRINIDAD, sanitation at, (7) 1397
TROCHANTER minor, isolated tearing off of, (90) 483
TROPACOCAIN spinal anesthesia, heart block after, symptoms suggesting, (98) 1269
TROPICAL countries, iodin as antiseptic in, (7) 2067
diseases, exhibition at Ghent, **916**
diseases, fund for research in, **1238**
diseases in Republic of Columbia, (27) 1400
diseases in Tripoli, (15) 1191
diseases, value of prophylaxis in solving, **1797**—E
medicine, congress in Orient on, **1811**
medicine, course in, for training of internist, value of, **1820**—ab
residence and copious water drinking, **611**—ab
sore, treponema found in, (151) 1406
TROPICS, clothing in, **370**—E
mosquito-proof and storm-proof house for, new, (3) **1397**
sanitation in, generally, and sanitation in Canal Zone, **1569**—ab
sunlight in, **208**—E, **284**—E
TRUSS, wrosted, (49) 782
TRYPANOSOMA contagious for mice, (40) 246
evansi, stomoxys calcitrans in transmission of, (112) 1836
rhodesiense and trypanosoma gambiense, measurements of, (2) 1397
rhodesiense in glossina morsitans, devolepment of, (9) 401
rhodesiense in glossina morsitans, influence of meteorologic conditions on development of, (6) 243
rhodesiense in rats, posterior nuclear forms of, (5) 1397
TRYPANOSOMES and spirochetes are parasites of lymph rather than of blood, (59) **1986**
anemia, experimental, (21) 786
antimony in spirochete disease and, (86) 1113
causing disease in man and animals in Sebungwe district of Southern Rhodesia, (33) 1669
diseases, insoluble antimony salts in small doses effectual in, (60) 1840
of game and domestic stock in Northeastern Rhodesia, (8) 401
pathogenic immunization of large animals to, by avirulent strain, (29) 1578
TRYPANOSOMIASIS, (22) 860, **1822**—ab
animal, in Lado and tsetse fly traps and alleged immune brood of cattle in Southern Kordofan, (6) 1397
in Portuguese Congo, apparent cures, (32) **1264**
of domestic animals in Northern Nigeria, (1) 1397
with symptoms of sleeping-sickness, (116) 870
TRYPSIN in stomach, (119) **1843**
in surgical tuberculosis, (43) **481**
isolating, new method of, (39) 1665
-secreting capacity of pancreas, (182) 488
TRYPTOPHAN in feces, clinical significance of indican and urorosein in urine and, (81) 2072
-splitting ferment in pathologic effusions, (83) 704
test for cancer, sources of error in, (139) 252, **907**—E
TSETSE-FLY: See Glossina Mortisans
TSUCHIYA'S method, Pfeiffer's modification of, and Claudius' method for quantitative determination of albumin in urine, (85) 1671
TUBE, duodenum, its value as diagnostic and therapeutic agent, (96) 1667
TUBERCULAR and tuberculous, distinction between, **541**
TUBERCULIDES, (94) 1835
papulonecrotic, in infants, (2) **2066**
TUBERCULIN, ambulatory tuberculosis, chronic, advanced, results of, **395**—ab
and Roentgen ray in recognition of early lung tuberculosis, (67) 1396
as specific cure, present evidence for and against use of, (1) **1743**
bovine and human, reaction in children to, (177) **1753**
by mouth is of doubtful value, **851**
De Giaxa's, local action of, (128) 1932
development of susceptibility to tuberculosis in incubation stage, (68) 632
diagnosis and treatment, (86) 697, (34) 1745, (120) **1836**
diagnosis of tuberculosis in children, (110) 1196
diagnostic and therapeutic value of, new form of, (46) **87**
dispensaries of London, (7) 85
Dixon's, in advanced chronic ambulatory tuberculosis, results, ***717**
effect on neutrophil polymorphs, (8) **555**
hypersensitiveness to tuberculoprotein and, (33) **1665**
immunity and, (13) 401, (83) 792
in genitourinary tuberculosis, (97) **1923**
in lung tuberculosis, (22) **1101**, (12) **1582**
in lung tuberculosis, small doses of, (39) **403**
in lung tuberculosis, suspected "closed," provocative injection of old, alleged diagnostic value of (22) **480**
in tuberculosis of cervical lymph-nodes, (155) **243**
introduced directly into lymphatic system, action of, (127) **1932**
nature of serums, vaccines and, their use in tuberculosis, (29) 1395
organic acid ratio of urine after, (6) 699
Reaction: See Reaction, Tuberculin
Rosenbach's, in tuberculosis, in children, (174) 1753
salve reaction, (111) 1673
salve, reaction to, clinical importance of, 500 cases, (48) **948**
therapeutic value of, unmistakable clinical proof of, (68) **627**
treatment, (15) 164, (96) **250**, (73) 404, (38) **481**, (5) **699**, (37) 1187, **1560**, **1574**—ab
treatment, uniform method of, plea for, (2) **1743**
varieties of, (4) **699**
TUBERCULOMA of larynx, (17) 1399
TUBERCULO-PROTEIN, hypersensitiveness to, effect on subsequent infection with bacillus tuberculosis, (40) **398**, (33) **1665**
Von Ruck's new, animal experiments with, ***1936**
TUBERCULOSIS, (119) 1030, (49) 1326
acute, curable forms of, (159) **708**
acute, developing after gynecologic operations, (187) **563**
agglutinins, local, in diagnosis of, (53) 1332
albumin in sputum for early diagnosis of, importance of, (45) **1584**
albumin reaction in sputum in, ***440**
alcoholism, syphilis and, (109) 1835
allyl sulphid in, (45) 1265
among Gurkhas, effect of overcrowding in barracks on, (19) 1033
among well-to-do, (68) **792**
and public health in South Africa, (82) 242, (25) 625
anemia, pernicious, in, (51) 631
antibodies in, importance of, (122) **560**, (119) 1501
antibodies produced in cattle, **1801**—E
appendix, (45) 1926
arrested, (47) 86
arteries, large, ***1413**
artificially induced climatic conditions as adjunct to treatment in early stages, (142) 1030
ascitic fluid, tuberculous nature of, with cirrhosis, (62) 248
Association secretaries' meeting, **1717**
asthma and, in children, (34) 1034
attendant, group of infants infected by, ***1617**
attenuated tubercle bacilli in, treated with sodium fluorid, (45) **1497**
Bacillus: See Bacillus, Tuberculosis
bacteriology, in relation to its diagnosis, treatment and immunization against disease, (48) 866

TUBERCULOSIS, bacteriology, pathology and research in, (23) **480**
Bannerman's solution for, **1724**—P
bladder, (127) 1589
bladder, exclusion in, (87) 1333
blood-findings in, (74) **703**
bone abscesses and sinuses due to, tuberculin in, (75) **1493**
bone and joint, (118) **329**, (41) 480, (89) **1988**
bone and joint, experimental study, (30) **942**
bone and joint, in children, types of organism in series of, (3) **1494**
bone and joint, modern treatment, (69) 482
bone and joint, special institutions for treatment and care of, necessity for, (43) 2070
bone and trauma, **1917**—ab
bones, leukocyte count in osteomyelitis and, in children, diagnostic significance of, (19) **1492**
bovine and human, (7) 1668
bovine and human, Italian contributions to relations between, (95) 169
bovine, stringent measures against, **844**
bovine, transmission to man, (93) 169
breast, (15) 625
brushing of clothes and, **1805**
calcium metabolism and, (98) 1749
calcium salts abstracted from mother's blood by fetus cause of rapid progress in tuberculosis, (6) 1831
campaign against, (97) 1029
campaign against, in Christiania, (133) 1932
campaign against, in Spain, (177) 1272
campaign against, in United States, newer problems and newer phases of, (69) 628, (16) 1492, (22) **1831**
care and aftercare of patients with, (91) 1922
care of patients with far advanced, (21) 2067
children, (51) **481**, (212) 564 (85) **1195**, (139) **1502**
children, bacteriology of, (217) 564
children, modern combat against, (51) 87
children on Mediterranean coast, treatment, (26) 1191
children, Roentgen rays in diagnosis of, (37) 86
children, Rosenbach's tuberculin in, (174) 1753
children, tuberculin in diagnosis of, (110) 1196
climate in, (128) 85, (31) 480, (123) **1836**
clinic, St. Louis municipal, (91) **161**
colon and vicinity, (71) **1671**
colon, rectum and anal canal, surgical, (44) 480
colony, remarkable, (81) 242
common diseases mistaken for, consideration of, (59) 1326
compulsory declaration of, (85) 89, **608**, (132) 952
congenital, (78) **1586**
control and visiting nurse, (77) 242
control of careless and incorrigible patients, (11, 14) 1919
control of venereal diseases and, helps in, (77) 553
copper, effect of, on experimental, ***887**
copper in external, (91) 1268
cotton mill and, (71) 1327
cystitis due to, in elderly, (68) **558**
day camp for, (63) 863
death from, in fifth ward (Philadelphia) during 47 years, (27) **695**
death-rate, reduction in, 1871-1912, **1571**—ab
decline of, **1895**
diagnosis, earlier, (155) 1031
diagnosis, early, and internal antisepsis, (57) 1493
diagnosis, early, management among poor, (28) 1740
diagnosis, early, with special reference to its confusion with malaria, (119) 1836
diaphragm hernia, probably traumatic, in adult with, (44) 1584
dietetic treatment, (32) 480
dioradin in surgical, (7) 699
disease of the individual, (45) 696
dispensary and day camp in relation to campaign against, (81) 1107
dispensary, what is it? (47) 1670

TUBERCULOSIS, dispensary work in, results, (23) 317
drugs in, use and abuse of, (33) **480**
Duket cure, **1476**—P, **1646**—E
Duket cure, giving results of some investigations, **1653**—P
ear, (48) 480
economic cost of, revised estimate of, (52) 627
economic value to community of recent work against, (69) 944
economic viewpoint of, (98) 1397
educational campaign against, (83) 242
elbow excision for, end-result, (14) 1104
employees, care of, by corporations as employers, (83) 1922
endotoxins of living and dead tuberculosis bacilli in solution in active immunization against, relative value of, (50) 1107
examination of employees for, (85) 697
eye and, (49) 480
eye-strain in, (20) 475
femur, lower end of, (13) 1582, (41) 1670
final report of committee on, **1007**
finding early cases of, method for, **1570**—ab
forest reserves and, (79) 242
Friedmann alleged cure for, is it commercial or scientific proposition? **375**—E
Friedmann method of treating, newspaper puffs for, **845**
Friedmann treatment, **67**—C, **70**, **309**, **466**, **532**, **679**, (41) 782, **917**, **1010**, (29) 1105, **1807**, (45) 1982
Friedmann treatment, and government, **1007**
Friedmann treatment, government report of, **672**—E
Friedmann treatment, investigation of, (108) 1835
Friedmann treatment, misapprehension as to novelty of, **753**—E
Friedmann treatment, public health service investigation of, **1572**—ab
genitalia, in female, **1101**—ab, (121) 1589
genitalia, in female, management of, **1101**—ab
genito-urinary and urinary, (46) 480
genito-urinary, in women, (116) **1115**, (31) 1325
genito-urinary, paths of infection in, (20) **865**
genito-urinary system from general practitioner's standpoint, (7) 2066
genito-urinary, tuberculin in, (97) **1923**
gold preparations in, (100) 1403, (97) **1672**
heart in, (201) 564
hemolytic jaundice in, (104) **793**
high altitudes in Andes, experimental, (162) 708
hip, mechanical treatment, results in, and hygiene, (3) **859**
home hospital for, one year's results at, **1571**—ab
home treatment, rules for living, (29) **480**
homeless patients with, compulsory detention of, (93) 1835
hospital, donates, **1472**
hospitals and sanatoria for, (3) 1918
hypophysis, (176) 488
immigration of people with, into United States, problem for every nation, (17) 1980
immunity, approximate, against, Spengler's rapid precipitation method for estimation of, modification of, (34) 1400
immunity through infection, (93) 478
immunity to, and branched forms of tuberculosis bacillus, ***993**, **1002**—E
in early life, (108) 1029
in Ireland, (54) 480
in LaFayette county, ten years' survey of, (136) 85
in motion pictures, (76) 242
in navy, (110) 794
in Pennsylvania, department of health's activity in handling, (90) 864
in rural districts, prevention of, **1689**
in schools and colleges, (105) 478
in state legislatures, (61) 1666

TUBERCULOSIS, incipient, stomach symptoms in, (101) 629
industries in relation to, **1572**—ab
infants and children, diagnosis of, (125) 699
infants and children, pathology of, (17) 1583
infants, glandular or secondary form of, pathogenesis of, (60) 398
infants, prognosis of, (120) 636
infants, roentgenoscopy of, (34) 1926
infections in, routes of, (110) 251
inflammatory, (86) **1500**
inflammatory, Poncet's, (42) **1584**
inheritance in 442 families among workingmen, (63) **248**
inoculation tests in, improved technic for, (81) 792
intestines, perforation of, multiple, (51) 1034
introductory to advanced course on, (20) 401
joints, (110) 869
joints, diagnosis, (26) 1665
joints, treatment, (108) 1262
kidney, (164) 1502
kidney, bilateral, nephrectomy with, (138) **408**
kidney changes in, (77) 1267
kidney, chronic, (135) 85
kidney, cystoscopy in diagnosis of, value of, (77) 864
kidney, diagnosis, (44) 318
kidney, diagnosis and treatment, (75) 1671
kidney, diagnosis, early, (44) **1400**
kidney, in children, (42) 1034
kidney, in half of double, (144) 1674
kidney, indications and results of medical treatment, (38) **1034**
kidney, microscopic miliary tubercles of ureter mouth early sign of, (59) 1671
kidney, pseudo-healing of, (37) **166**
knee, in children, treatment, (113) 483
larynx, (47) 480, ***1518**
larynx in, (59) 482
larynx, incipient, (105) 399
larynx, treatment, (84) 161
latent, in children and adult tuberculosis, (82) 161
life insurance and, (58) 480
light rays for internal, (148) 252, (214) 874
ligneous, of thyroid, (70) **1499**
liver, surgical treatment, (85) **483**
liver, with jaundice, (95) **1667**
localized, treatment, (52) 480
lung, abortive, (90) **1835**
lung, accident and injury in relation to, from medicolegal point of view, (35) 398
lung, and peripheral nervous system, (58) 552
lung, and teeth, (38) 631
lung, antiseptic inhalation, continuous, in, (36) 480
lung, artificial pneumothorax in, (49, 54) 82, (41) 166, (21) **244**, (35) 480, (112) 483, **532**, (60) **696**, (55) **949**, **1167**, (57) 1266, (43) 1497, (72) 1671
lung, artificial pneumothorax in, by injection of nitrogen, (55) **88**
lung, artificial pneumothorax in, Forlanini method for, (34) 239
lung, autonomic nervous system in course of, (133) 1674
lung, clinical study, (27) 1330
lung, "closed", tuberculin in, alleged diagnostic value of, (22) **480**
lung, crotalin in epilepsy and, action and administration of, (84) 1189
lung, diagnosis, (77) 1262
lung, diagnosis and treatment in early stages, (25) 480
lung, diagnosis, early, (32) 866, (112) 1189, (143) **1197**, (10) 1495
lung, eosinophilia in diagnosis and prognosis of, (120) **1843**
lung, graduated rest and exercise in, (30) 480, (54) **944**
lung, heart displacement with, (72) **1267**
lung, hematologic equilibrium in, (51) 1395
lung, hilus and peri-hilus, sequelae, (23) 630
lung, hilus, in children, roentgenoscopy of, (98) 950
lung, in aged, **1065**—ab
lung, in children, remineralization in, (59) 1498
lung, in dog, experimental, (23) 1578
lung, in infants, roentgenoscopy of, (52) 247

TUBERCULOSIS, lung, incipient, (113) 478
lung, individualizing, (121) 1836
lung, infection in, (37) **1981**
lung, infection of children in relation to adult, (60) 1666
lung, influence of contents of pulmonary artery on experimental (30) 1980
lung, marginal sounds in diagnosis of, (80) **83**
lung, mechanical predisposition of, (76) **1267**
lung, meningeal affection in, in adults, variations of clinical picture, (52) 1028
lung, muscle degeneration and rigidity in, theory of, **1241**—ab
lung, not ground for divorce, **1568**—Ml
lung, operative treatment, technic for and experiences with, (111) **1196**
lung, origin of, (118) 1836
lung, preliminary talk to patients undergoing treatment for, (74) 242
lung, primary focus in, (119) **251**
lung, primary focus in, roentgenoscopy of, (73) **1267**
lung, prognosis in, (124) 484, (18) 1109
lung, prognosis in, results with Arneth's method, (3) 1743
lung, psychotherapy in, (107) 1835
lung, sanatorium treatment and after-care, (28) 480
lung, sanatorium treatment, cases selected for, (14) 323
lung, sanatorium treatment, in civil hospital, (23) 1669
lung, seasonal variation of symptomatology of, (19) 1105
lung, selection of cases for institutional, domiciliary and dispensary treatment under national insurance act, (37) 324
lung, summary of 340 cases, (23) 1109
lung, treatment, (13) 323, (27) 480, (30) 1109
lung, treatment by class methods, six years of, (36) **239**
lung, treatment, specific methods, (36) 631
lung, tuberculin, (37) 1187, (22) **1191**, (12) **1582**
lung, tuberculin and Roentgen-ray in recognition of early, (67) 1396
lung, tuberculin in, small doses, (39) **403**
lung, wedge resection of ribs to reduce size of thorax in, (165) **487**
lung, with complete cavitation of left lung, (33) 1983
lymph-node, cervical, conservative treatment based on their pathology, (107) 242
lymph-node, cervical, tonsil removed in treating, necessity for, (156) **1752**
lymph-node, cervical, tuberculin in, (155) **243**
lymph-node extract in immunization against, (147) 92
lymph-node, histogenesis of, (111) 251
lymph-node, perforation into bronchus, (130) 1116
lymph-node, resection of, at bifurcation to relieve trachea stenosis, (68) 1035
mediastinal lymph nodes due to, in children, (197) **873**
meningitis due to, (96) 399
meningitis due to, causing pseudo-eclampsia, (29) **1745**
meningitis due to, conditions favoring development of, (97) **950**
meningitis due to, early symptoms of, (52) 87
meningitis due to, etiologic factors in, (118) **407**
meningitis due to, experimental, effects of subdural injections of leukocytes on development and course of, (45) **241**
meningitis due to, glycosuria in, (37) **402**
meningitis due to, history, symptoms, prognosis, (170) 1753
meningitis due to, primary focus with, (83) **1987**
menstruation disturbances originating from, (67) 404
mesbe in, disappointing experience with, (110) 328, (89) 704
mesentery lymph-nodes, simulating appendicitis, (30, 31) **239**

TUBERCULOSIS, miliary, acute, pulmonary form, atypical case, (30) 1027
mortality from, in insane asylums and prisons of Norway, (209) 874
mortality statistics on, misleading, (17) 1831
municipal control of, (87) 1262
myeloid leukemia and, (52) 631
National Association for Study and Prevention of, meeting in Washington, **1311**
naval hospital for, Las Animas, Colo., (151) 479
occupation with regard to, (124) **1336**
1,500 cases, (87) 1835
open-air schools in fighting, value of, **1090**—ab
opsonic method and, (37) **481**
orthostatic albuminuria and, (116) **1196**, (85) 1586
osteomyelitis of digits due to, (16) **1919**
ovary or fallopian tube, lesions of intestines with, (68) **1267**
passing of, (12) 1837
patients discharged from Mont Alto State Sanatorium in 1908 and 1909, ultimate results, **1570**—ab
peritoneum, general, female sterility as salient feature of, (15) 556, (43) **631**
peritonitis due to, (91) 945
peritonitis due to, developing after labor, (70) 1113
peritonitis due to, how does laparotomy cure? (17) **695**
peritonitis due to, jaundice, chronic, from old, (66) **1266**
peritonitis due to, sunlight in, (53) 247, (27) 1191
peritonitis due to, without effusion, *(16) 2069*
phosphorus metabolism and, (34) **481**
pneumonia due to, acute, recovery, (18) 1583
pneumothorax in, (49) 1401
Polymesian Islands, responsibility of Europe for spreading, (61) 248
Potters to fight, **139**
practical studies in, (64) 1834
pregnancy and, (50) **948**, (115) **1115**, (83) 1494
pregnancy, labor and puerperium in relation to, (13) 1324
prevention and relief of, examination of exposed, as factor in, **1575**—ab
prevention, education of public in, (55) 480
preventorium, **1570**—ab
problem from sociologic viewpoint, **1572**—ab
problem, medical side of, **1571**—ab
problem of country and small towns, **1570**—ab
prophylaxis, (163) 1118, (57) 1671
prophylaxis of, and tuberculosis *bacilli* in bile, (87) **634**
prophylaxis of, specific, (147) 1270
public health and, (57) 480, (27) 626, (15) 1492, **1571**—ab
public health and housing problem, (56) 480
puerperae and their children, what should be done with? (84) 697
quack practices and, (162) 1198
rain-bearing winds and prevalence of, (53) 480
reaction in those operated on for, (9) 1831
research on leprosy and, (137) 952
resisting powers of red blood-corpuscles not reduced in, (65) 1840
respiratory tract, upper, campaign against, **221**
rheumatism and, (6) 629
rheumatism due to, and chronic arthritis, (53) **1401**
Roentgen ray treated spleen extract in, (134) **92**
roentgenotherapy of, (110) 483, (61) **949**, (81) 1037, (109) **1404**
Von Ruck new cure, animal experiments with, ***1936**
von Ruck treatment, U. S. Senate asked to investigate, **1816**—ab
sanatorium in preventing spread of, (112) 90
sanatorium, not a source of danger for environment, (109) 1189
sanatorium treatment, (43) 696
school as factor in, (207) 564
sero-anaphylaxis and special forms of, (50) 701
TUBERCULOSIS, serodiagnosis in, value of, (40) **403**
serotherapy of, (143) 1030, (138) 1116, (29) 1395, (61) 1840
serums, vaccines and tuberculins in, (29) 1395
skin, diagnosis, (34) 317
skin, extensive, with death from pyemia, (51) 1666
Spine: See also Spine, Pott's Disease
spine, plaster-of-paris in mechanical treatment of, (42) 480
spondylitis due to, treatment, (32) 1191
spondylitis due to, treatment at Leysin, Switzerland, (54) **167**
sputum, bacillary fragments in, (117) 1749
sputum stain in, (169) **1676**
state sanatoriums for tuberculous versus free specific treatment, (88) **1987**
Stevens' cure, **1086**
stomach, (75) **1267**, (108) **1500**
stomach and intestines, (45) 486
stomach, combined with cancer of stomach, partial gastrectomy performed in, (5) **1738**
stomach, with extensive tuberculous lymphangitis, (44) **1107**
sunlight in surgical, direct, (111) **484**, (152) **562**, (79) 1840, (37) 1926
suppurating, excision of hip-joint in 34 cases of, results, (7) **864**
supraspinatus muscle, (7) 1491
surgical, (65) 1262
surgical, biologic test in, (91) **559**
surgical, improved hygiene in management of, (83) 697
surgical, reaction to tuberculin from bovine tubercle bacilli in *children with*, (92) **1988**
surgical, relapses in, (114) **484**
surgical treatment, (40) 480
surgical, tuberculosis bacilli in circulating blood in, (105) **705**
sweat in, (107) 170
testicle, bilateral, (33) 781
testicle, tuberculosis bacilli in urine with, (88) 1268
testicle tubules, primary, (67) 632
thoracic lymph-node, in children, diagnosis, (84) 1743
throat in prophylaxis of, **1504**—ab
thyroidism and, (140) 871
Torquay tuberculin dispensary, treatment at, (39) **480**
treatment, (127) 85, (78) 1922
treatment, importance of general measures in, (156) 92
treatment of human, by branched form of tuberculosis bacillus, ***1294**
treatment of progressive cases, **1570**—ab
trypsin in surgical, (43) **481**
tuberculin and immunity to, (83) 792
tuberculin (Dixon's), in advanced chronic ambulatory, results, ***717**
tuberculin in advanced chronic, ambulatory, **395**—ab
tuberculin in diagnosis and treatment of, clinical value of, (120) **1836**
tuberculin in incubation stage of, development of susceptibility to, (68) 632
tuberculin in, new, controlled therapeutic use of, (5) **699**
tuberculin in, quantitative and qualitative effect on polymorph neutrophil leukocytes, (8) **555**
tuberculin in, varieties of, (4) **699**
tuberculin *reaction* cutaneous, in prophylaxis of, (133) 706
tuberculin therapy, (15) 164, (73) 404, (38) **481, 1560**
ulcer of ileum and cecum due to (33) 1106
urinary tract, (19) 323
uropoietic system and tuberculous meningitis, correlation between, in Vienna, **533**
vaccination of cattle against, (34) 1330
when one of family devolops, (116) 320
with disorders of nervous system, (50) 480
TUBERCULOUS and tubercular, distinction between, **541**
TUMORS, abdomen, in children, (126) 952
abdomen wall, (75) 482
animal parasites in formation, **1077**—E
TUMORS, auricle, left, primary, pulsation in esophagus and in jugular vein in, (71) 1267
benign or malignant, diagnosis and treatment of border-line pathology, **2065**—ab
biology of, (16, 39) 86
bladder, early recognition of, (17) **860**
bladder, fulguration in, (14) **1395**
bladder, in workers with anilin dyes, (153) **1675**
bladder, recent cases at Massachusetts General Hospital, special reference to operative technic, (18) 860
bladder, roentgenoscopy of, (100) 1262
bone, (53) 1833
bone, of thyroid origin, (95) **869**
brain, ***1280**
brain, after history of, ***1418**
brain, base of, immediately behind hypophysis cerebri, **1023**—ab
brain, colloid, of third ventricle, death due to, (18) **479**
brain, eye disturbances with, (117) 794
brain, gaping of sutures of skull from, (76) 867
brain, opening up fourth ventricle and resection of vermiform process for, (78) **1113**
brain, operation, autopsy findings, (38) 398
brain, removal of, under local anesthesia, (115) 1269
brain, 63 cases, (163) 487
breast in men, (56) **1985**
breast, malignant, diagnosis and removal, (49) 477
breast, non-malignant, (63) 632
breast, special reference to cancer, (17) 239
carotid gland, (108) **484**, (121) **1843**
cerebellopontine angle, (52) 1746
cerebellopontine angle, surgery of, (140) 1750
cerebellopontine, *diagnosed and located* three years before death, (76) 1396
cerebellum, (4) **163**
cerebellum, operation for, (69) 249, (51) 1921
cerebral hemorrhages and, localization and removal of, consecutive displacement of cerebral hemisphere in, (22) 1324
cerebrum, causing pseudo-eclampsia, (29) **1745**
cerebrum, hemiplegia, gradually developing, due to, (54) 1107 (140) 1329
cerebrum, subcortical, tuberculous in nature, operation, recovery, (29) 1109
conus and cauda equina, giant, **1909**—ab
cystic, hemorrhage into cystic cavity from carcinomatous degeneration of, death due to, (114) 1263
diphtheria bacillus causing, (94) 1403
epithelial, non-malignant, granular substance of sarcosporidia in, (45) 1034
fallopian tube, malignant, primary, (41) 1741
fat necrosis cause of, (109) 559
formation and allied pathologic processes, (29) 402
genitalia, serodiagnosis of pregnancy and, (87) **950**
genito-urinary tract in anilin-dye *workers*, **206**—E
growth, trauma in connection with, (132) 1590
heart, (46) **790**
hyphophysis cerebri, and adiposity, (126) **91**
hypophysis cerebri, classification of (8) **1744**
hypophysis cerebri, *and infantilism*, (7) 1979
hypophysis cerebri, new formation of nerve cells in isolated part of nervous portion of, *in acromegaly* with diabetes, (2) **1663**
hypothesis cerebri, removal of, (81) **482**
in animals, biology of, (66). 1035
in cold-blooded animals, (123) 1404
in diabetes, disappearance of *sugar after* removal of, ***661**
influence of ultraviolet light on tumors due to filterable agent, **2021**—ab
inheritance of tendency to, experimental research on, (125) 1405
intestine, malignant, (4) 629
intracranial, after decompression, localization of, (122) 1264
TUMORS, intercranial, growth and survival period of, records of 500 cases, special reference to pathology of gliomata, (9) 629
intradural, spinal canal, removal, (51) 1028
intrathecal, removal from lumbar region of spinal cord, (7) 1743
kidney, (26) 787
kidney, adrenal and testicle, embryogenetic relationships of, **236** ab, (26) 1325
kidney and ureter, (10) **475**
kidney, malignant, clinical data on, ***274**
kidney region, roentgenoscopy of large intestine with, (101) 950
kidney, symptomatology of, 74 cases from Massachusetts General Hospital, (20) 860
lecithin and cholesterin influence of, on growth of, (28) **942**
lungs, (110) 1673
lungs, diagnosed by upper bronchoscopy, (41) 943
lymphoid of skin, multiple, (101) 1328
malignant, (108) 478
malignant, blood catalase in, (56) 1395
malignant, deep-seated, superficial metastatic growths in dignosis of, (99) 399
malignant, early diagnosis in, necessity and means for, (55) 1262
malignant, family incidence of, (72) **863**
malignant, grafting and traumatic dissemination of cancer in operations for, ***512**
malignant, nature of, (105) 1189
malignant, produced from parasites of earthworm, (102) **242**
malignant, radio-active substances in, (159) 562
malignant, spontaneous cure, (137) 401
mediastinum, early signs of, (31) 244
metastases, production and growth of, **2021**—ab
metastatic, of thyroid, nature of, (12) **551**
mouth and pharynx, malignant, operative *treatment*, (21) **1583**, (86) **1669**
mouth and tongue, malignant, (105) **1029**
nasopharynx, access to, by transverse pharyngotomy, (88) 483
nerves associated with fibroma molluscum, largest specimen on record, **936**—ab
nose, treatment, (127) 1038
omentum, (66) 1840, (23) 2069
optic nerve, short clinical accounts with microscopic demonstration of two cases, (28) 397
orbit, plea for operation, (3) 945
orbit, radiotherapy of, (69) 1396
ovary, complicating pregnancy and labor, (123) **321, 1373**
parotid gland, (5) 1982
parotid gland, embryonal *predisposition* to, (66) 702
pineal gland, (134) 1590, (46) **1839**
pineal gland, abnormal physical *and* sexual development in infant probably due to, (25) 1260
placenta, (42) 1331
pleura, malignant, primary, clinical and pathologic report of case, (5) **694**
purins and purin metabolism of some, in domestic animals, **2021**—ab
radium and mesothorium for, (107) 90
rectum, melanotic, primary, (56) **701**
serodiagnosis of, (129) 485, (90) **1841**
spinal cord, (46) **1111, 1391**—ab
spinal cord, diagnosis, (55) 2070
spinal cord, extradural, removal of, **1819**—ab
spinal cord, with intermittent symptoms, *(136) 1590*
spleen, metastatic, (169) 488
stomach, non-malignant, operative removal of, (83) 1927
syphilis as factor in, (58) **1927**
testicle and epididymis, (84) 1834
thorax, (97) **1581**, (82) 1671
thorax, malignant, primary, diagnosis, *(1) 1923*
thyroid, epithelial, benign, (44) 627

TUMORS, transplantable, of fowl, producing cartilage and bone, (46) **1261**
  uterus, and goiter, **1572**—ab
  ventral, of sacrum, **314**—ab
TUNICA vaginalis, sarcoma of, (100) 869
TURBINATES, inferior, enlarged, technic for operating on, (212) 1754
  inferior and middle, operation on, indications for, (92) 1667
TURBINOTOMY, indications and justification, (167) 163
TURNER, George, knighted by English King, **919**—ab
  obesity cure, Mr. Turner explains, **614**—P
TWINS, manual removal of first placenta without discovery of second child, **528**
  rachitis and spasmophilia in, tendency to, (116) 251
TYMPANUM, sinus thrombosis, lateral, primary, without involvement of mastoid process or, (22) 81
TYPHOID, agglutinability of bacillus, induced variations in, ***1141**
  agglutination reaction and experimental immunity in, ***1764**
  and paratyphoid *vaccination* with live attenuated vaccines; mixed vaccines, (19) **1109**
  apyrexial, (2) 785
  bacillus, anaphylatoxins and endotoxins of, (33) **626**
  bacillus, hyperleukocytosis following, specific and extreme, in immunized rabbits, ***1950**
  bacillus in alkaline medium, reduced agglutination of, (88) 1841
  bacillus, meningitis in infant due to, (54) **1188**
  bacillus on tonsils, (84) **1195**
  bacillus suipestícus, causing typhoid-like disease in rabbits, *clinical* course and prophylactic vaccination, (33) 1981
  bacillus, toxic split products of, (45) **1261**
  carrier, ***183**, **222**—ab, (54) 477, *(80)* **634**, *(171) 1676*
  carriers, chronic, surgical method of clearing up, ***1293**
  carriers, prize for means to cure, **1804**
  chemotherapy of, **1364**—E
  Cleveland in 1911, (60) 83
  control of infection, ***6**
  cultivation of bacillus typhosus from spot in luetic typhoid subject after fastigium, (79) 944
  diagnosis, mistakes in, (85) 83
  diet and treatment, (120) 400
  diet, full, (72) 319
  diet, high calory, (53) **1107**
  diet, increased, arguments for and against, (46) **1493**
  diet, low-caloric food values in, clinical experiments in, (106) **1668**
  diet, restricted, (73) 319
  does filtration of water avert danger of? **541**
  ear in, **1241**—ab
  epidemic due to milk, ***1950**
  epidemic due to mistake in piping water, **1720**
  epidemic in Belleville, Ill., (24) 1831
  epidemic in Lincoln, Neb., 1911 and 1912, (28) 475
  epidemiologic diagnosis and management of, (43) 1920
  epidemiology of, (72) 553
  epilepsy in, (75) 1499
  frequency of, at summer resort and necessity for *paying attention* to sanitation, **1232**—E
  from contaminated vegetables, danger of, **1303**—E
  hemorrhage in, (131) 85
  hemorrhage, treatment, **1733**—ab
  hexamethylenamin in, (50) 1034
  hospital experience with, during 46 years, (95) 1749
  immunization, experimental, (163) 1675
  in flood area, prophylactic measures against, first taken by Red Cross, **1174**—C
  in large cities of United States, ***1702**
  in rabbits, (121) 91, (63) 404
  in United States, **1707**—E
  infection, sanitary closet-cans in prevention of, **308**—C
  infectiousness in, duration of, (122) 91
  iodin in, (56) **557**
TYPHOID, laboratory diagnosis, (71) 319
  milk-free treatment, (57) **552**
  mortality, **2061**
  municipality liable for water causing, **70**
  neuritis *following*, (36) 1832
  osteitis, suppurative, following, 13 years after enteric fever, (14) 699
  oysters and, **916**
  pain in cystic duct sign of, prognosis, (58) **247**
  perforation in, operation for, early ***122**
  perforation of intestines, (131) **408**
  prevention of, (74) 319, (80) 628, (55) **1834**
  prophylaxis, (59) 632
  prophylaxis in British army in India and *American army in United* States, (90) 1189
  recurring catarrhal jaundice with positive tests for, (50) 866
  relapses, prognosis in, (138) **330**
  rupture of spleen from slight trauma in, (66) 1586
  rural, **510**—ab
  rural origin of city, **1157**—E
  septicemia, secondary, in convalescence from, (96) **169**—ab
  serotherapy in, efficacy of, (40) 1331
  spine, pathology of, (11) **940**
  spondylitis in woman of 60, (50) 1746
  surgical complications in abdomen during, (124) 1836
  surgical complications, sequelae of, (47) 1493
  test, urinary, Russo's, modification of, its use in 1,000 cases, and complete bibliography, (44) **1833**
  thrombophlebitis in, symptomatology of, (18) **158**
  transmission, modes of, (47) **701**
  treachery of, (30) 1740
  treatment, (56) 477, (70) 1327, (25) 1919
  treatment in children, (72) 1493
  ulna neuritis following, (183) 488
  unusual case, (30) 1669
  vaccination, (119) 320, **467**, (68) 783, (47) 1028, (123) **1264**, (35) 1330
  vaccination as excuse, **57**—E
  vaccination as state and municipal duty, (101) 1667
  vaccination, experience with, (106) 242
  vaccination in children, ***344**
  vaccination, in India, successful, **62**
  vaccination in Maryland, (43) 944
  vaccination in prophylaxis and treatment of, value of and method of *administration*, (45) 1493
  vaccination in United States, (45) **1331**
  vaccination in United States army, **1167**
  vaccination, prophylactic, (102) 320, (112) 1397
  vaccination, variations in cholesterin content of blood under, (70) 1267
  vaccine, **1074**, **1541**
  vaccine and nursing mother, **1560**
  vaccine, effect of freezing on, (20) **1027**
  vaccines, mixed, effect of, with regard *to formation of agglutinins*, (21) **1027**
  walking, (129) **1844**
  water pollution and, (71) **553**
TYPHUS: See also Brill's Disease
TYPHUS, (117) **400**
  at Massachusetts General Hospital in last ten years, (16) **475**
  in children, (79) 482
  in United States, problem of, ***1845**
  mild, in Michael Reese Hospital, (55) 398

U

ULCER, abdomen, excised *from* anterior wall of, pathologic data from, (30) **1832**
  bladder, ***419**
  bladder, callous, pathology and treatment, (118) **1328**
  bladder, syphilitic, ***1943**
  cornea, (100, 108) 785
  duodenum, (91) **697**, **1374**, (118) **1404**, (83) **1748**
  duodenum, and cholecystitis, diagnosis, (110) 1189
  duodenum, complications, **1573**—ab
  duodenum, diagnosis, (98) 1108, (60) **1586**
  duodenum, diagnosis and prognosis, **1573**—ab
ULCER, duodenum, diagnosis by serial roentgenography, (87) 1667
  duodenum, etiology and morbid anatomy, **1573**—ab
  duodenum, hemorrhage from erosion of gastroduodenal artery by, fatal, **151**—ab, (31) 1832
  duodenum, in infants, (105) **1500**
  duodenum, *non-surgical* treatment, **1573**—ab
  duodenum, perforated, (58) 87, (7) 164, (120) 1264, (79) 1494
  duodenum, perforation in, frequency of, seven cases, (42) **1265**
  duodenum, roentgenography of, **1374**
  duodenum, surgical treatment, **1574**—ab
  duodenum, *symposium* on, **1573**—ab
  fibromatosis of stomach in relation to cancer and, **2022**—ab
  hypopyon, of cornea, treatment, (65) 1982
  intestine, wide-spread, fatal case, (11) **1398**
  leg, chronic, (100) 629
  leg, chronic, basic fuchsin in, ***1680**
  leg, office treatment, (197) **488**
  peptic, gastro-enterostomy for, after-history, (6) **1108**
  peptic, in jejunum, jejunocolic fistula from, after gastro-enterostomy, (51) 867
  phagedenic, in Tripoli, (116) 1843
  pylorus, chronic, diagnosis and treatment, (112) **1931**
  scalp, in Roentgen-ray scar, operation for, new, (45) **1670**
  stomach, (109) 785
  stomach and duodenum, (150) 1329
  stomach and duodenum, diagnosis and treatment, (68) 1982
  stomach and duodenum, differential diagnosis, (134) 85, (59) **1035**
  stomach and duodenum, in relation to blood-vessel lesions, (1) **1979**
  stomach and duodenum, influence of gastro-enterostomy on, ***881**
  stomach and duodenum, method of operative procedure employed, (152) 1329
  stomach and duodenum, perforated, (21) 1109, (80) 1494, (129) 1501, (32) **1832**
  stomach and duodenum, perforated, *omentum cuff for*, (103) 1403
  stomach and duodenum, perforated, treatment, (65) 1402
  stomach and duodenum, scarlet red in, **1915**—ab
  stomach and duodenum, secondary nature of, (151) 561
  stomach, and pylorospasm, (83) **1587**
  stomach, callous, syphilis as factor in, (58) **1927**
  stomach, cancer and, epigastric hernia with, frequency of, (34) 700
  stomach cancer and, etiologic relationships between, (8) 2066
  stomach, *diagnosis of*, (136) 485
  stomach, experimental production of, (50) **1926**
  stomach, hypersecretion after test meal in diagnosis of, (61) **325**
  stomach, indirect treatment, **1503**—ab
  stomach, lymphatic diathesis predisposes to, (87) **1268**
  stomach, near pylorus, chronic, (159) **638**
  stomach, non-surgical treatment, (50) 1395
  stomach, of *spastic origin*, (75) **792**
  stomach, operation for encapsulated, *suppurating chondritis following*, (130) 1589
  stomach, operation for, results, (42) 1579
  stomach, perforating, (125) 870
  stomach, perforating, fibroid of stomach with, transgastric resection, recovery, (6) 396
  stomach, regional predisposition for, (120) 484
  stomach, roentgenoscopy of, (102) 1403
  stomach, *saddle*, closure of posterior edges of wound margin after excision of, how to simplify and make more accurate, (91) **784**
  stomach, surgical aspect of, (74) **1742**
  stomach, transition into cancer, frequency of, (29) 244, (15) **1919**
  stomach, without food retention, clinical analysis of 140 operatively *demonstrated cases*, (4) **1025**
ULCER, tuberculous, of ileum and cecum, (33) 1106
  vaccinal, antistreptococcus serum used locally in, (7) **940**
  varicose, Babcock's subcutaneous extraction *method of treating*, (136) 1844
  varicose, circumcision of leg for, (40) **1838**
ULNA, fracture of upper third of, treatment, (49) **701**
  fracture of, with dislocation of head of radius, (31) 1583
  neuritis following *typhoid*, (183) 488
ULTRAMICROSCOPIC organisms in disease, (38) 866
ULTRAVIOLET RAYS, (134) 407
  action on cholera and plague germs, (140) 1338
  action on milk, **1162**—E
  in sterilization of water, (214) 1754
  influence on tumor caused by filterable agent, **2021**—ab
UMBILICAL CORD clamp, (137) 321
  prolapse of, management of, (67) **482**
  rupture of, (96) 1195
UMBILICUS, adenoma of, (91) 1037
UNCINARIASIS eradication, **851**
  eradication, methods for, (25) 1831
  eradication, progress of, **1545**—E
  importation into California, (56) 1028
  in Birmingham, (32) 1745
  in Brazil, (129) 407
  in navy, diagnosis and dosage in, (129) 401
  in Porto Rico, economic aspects of, (5) 1025
  oleum chenopodii *in, efficiency of*, (131) **706**
  pathology and diagnosis, (104) 1108
  treatment, **1485**—ab
UNDERDEVELOPMENT, some features, **1362**—E
UNITED DOCTORS, **674**—E, **682**—P
  imitators of, **1900**—P
UNITED STATES *Army*: See *Army*, United States
UNITED STATES Government loses steamship suit, **1804**
  naval disciplinary barracks, detention and probation system of punishment and classification of offenses of, personnel of, (100) 1397
  Senate asked to *investigate von Ruck* treatment of tuberculosis, **1816**—ab
  Senate asked to license Friedmann, **1813**—ab
UNIVERSE considered as single organism, (130) 952
UNIVERSITY: See also Education, Medical Schools
UNIVERSITY at *Hamburg*, **459**
  German, foreigners as problem of, **608**
  of Minnesota, reorganization of medical faculty of, **692**
  of Missouri medical bulletins, **760**
UNKNOWN dead, *identification records* for, (20) 1831
UNREALITY, feeling of, nature of, (26) 625
URACHUS, permeable, in boy of *16*, (35) 166
URANIUM acetate, *chemical tests of* serous fluids with, (143) 92
UREA hydrochlorid and quinin, **147**
  hydrochlorid and quinin as local anesthetic *in anorectal surgery*, (132) 1836
  in blood and urine, constant ratio between, (42) **1400**
  in urine, Folin's microchemical method for estimation of, (94) 1327
  in urine, test for estimation of, clinical, rapid, (92) **1327**
  index, (39) 789
  index and pulse-kidney index, (60) 558
  index in blood, (55) **324**
UREMIA, clinical manifestations of, (23) 475
  nephritis, acute, with, *due to salvarsan*, (84) *629*
  respiratory disturbances in, (89) **327**
  scarlatinal, with blindness, (54) **631**
URETER abscess, (133) 1836
  and superior inlet, *relations between*, (71) 558
  anomaly of kidney and, congenital, (13) **1399**

URETER, apparatus for injection and lavage of pelves of kidneys and, *184
  calculus, bilateral, *114
  calculus, diagnosis by wax-tipped whalebone filiform bougie used with Nitze cystoscope, (158) 162
  calculus impacted in, fulguration for, *1534
  calculus, incarcerated, (67) 1927
  calculus, large, (3) 1982
  calculus of kidney and, (89) 1835
  calculus of kidney and, in shadow diagram of body, allotment of, (60) 1982
  calculus of kidney and, 110 cases of, and ten cases simulating these conditions, (22) 317
  calculus of kidney and, roentgenography of, (75) 558
  calculus, oil injections into ureter for, (78) 83
  calculus, operation for, (60) 1671
  catheterization of, under direct visual inspection, (45) 701
  catheterizing through open bladder, technic for, (39) 166
  injuries, (18) 695
  mouth, microscopic miliary tubercles at, early sign of incipient tuberculosis of kidneys, (59) 1671
  obstruction, (44) 1028
  obstruction or beginning of intermittent hydronephrosis, (21) 475
  stricture of left, congenital, double, with movable calculus between points of constriction, (11) 475
  supplementary, as cause of various affections of kidneys, (130) 1501
  suture, end-to-end, technic for, (55) 1670
  suturing incisions in kidney pelvis and, (34) 166
  tumors of kidney and, (10) 475
URETEROPYELOGRAPHY, recent progress in, (37) 1395
URETEROVESICAL valve, function of, *20
URETHRA and periurethral lithiasis, (72) 944
  bulbomembranous, impermeable stricture of, *262
  calculus in bilharziasis, (145) 1674
  calculus, prostatic division, *1952
  cancer, (188) 873
  caruncle, large, in girl of nine, *1281
  double, (70) 1580
  epithelium of testicles and, beware of injuring, (66) 558
  foreign bodies in, (27) 1740
  gonococci do not proliferate in only, (40) 166
  gumma, (113) 400
  irrigation of bladder and, (88) 1262
  laceration, (90) 793
  obstruction by prostate, 26 cases, (38) 1187
  obstructions in, removal, (119) 400
  polyps in, persistence of chronic gonorrhea explained by, (63) 1671
  posterior, disease in, treatment, (89) 945
  restoration of, with segment of vein, (117) 1843
  rupture, (67) 1671
  ruptures, retrograde catheterization in, (52) 696
  skin flap to interpose between rectum and, for fistula, (36) 166
  stenosis of posterior portion of, congenital, (187) 873
  stricture, (102) 635
  stricture, close, dense, excision and suture in treatment, (27) 1324
  stricture, impassable, external urethrotomy in, method of performing, *1606
  stricture, linear electrolysis for, (165) 1118
  stricture of male, tight, internal and external urethrotomies for, comparison of, (110) 242
  stricture, perineal fistulas, obstinate, following operation for, treatment and prevention of, (23) 625
  strictures, tight and complicated, treatment, (29) 781
  strictures, tight, dilatation of, causing retention, (98) 783
  strictures, ultimate outcome of, (63) 1927
  tannic acid, action on, 1656
  Thiersch flap for closing gap in, (91) 249
  trauma, (39) 166
URETHRITIS, chronic, 1074—T
  chronic, 1,000 cases of a form of, experience with, *1940
  consequences, (199) 563
  gonococcal, acute, in male, (42) 782
  gonorrheal, anterior, (32) 1838
  gonorrheal, antimeningococcus serum in, (93) 89, (55) 247
  gonorrheal, chronic, treatment, (152) 1406
  gonorrheal, in infant boy, (18) 1668
  old, flaring up of, during influenza, autovaccine therapy, (64) 558, (147) 1674
URETHRORRHEA, prostate elements in, (94) 633
URETHROSCOPE, operating, new, (122) 242
URETHROSCOPY by Goldschmidt's method, (200) 564
  clinical significance of, (8) 474
  light-carrier with lens and rheostat for, *182
URETHROTOME, new, (38) 782
URETHROTOMY, external and internal, for tight strictures of male urethra, comparison of, (110) 242
  external, in impassable stricture of urethra, method of performing, *1606
URIC ACID: See Acid, Uric
URICOLYSIS and suboxidation, (21) 158
  in human subject, (48) 1665
URICOMETER, Ruhemann, for uric acid estimation, *44
URINAL for bladder fistulas and after prostatectomy (71) 791
  retention, after cystostomy, (65) 1671
URINALYSIS, clinical interpretation of results, (40) 631
  hospital, (85) 1922
  in pregnancy, significance of, (29) 1740
  technic for, (126) 1501
URINARY TRACT, calculus in upper, (9, 12) 1495
  colon bacillus infection of, experimental, (141) 1750
  conditions in women with frequent or painful urination, (13) 1837
  diseases, late diagnosis, penalties of, (23) 1105
  diseases, surgical, diagnosis, (87) 161
  infections in women, (28) 317
  infections of upper, in infants and children, (14) 1577
  lesions of upper, methods of diagnosis, (12) 1831
  symptoms due to uterus fibroids, (97) 1108
  tuberculosis, (19) 323
  tuberculosis of, and tuberculous meningitis, correlation between, in Vienna, 533
URINATION, abnormally frequent, in acute infectious diseases, (7) 1987
  frequency of, cured by ventrofixation of uterus, (10) 1031
  painful, urinary conditions in women with frequent or, (13) 1837
URINE, acetone in, in children, elimination of, (92) 1195
  acidity, intensity of, in normal and pathologic conditions, (46) 318
  albumin in, quantitative determination of, by Claudius' method and Pfeiffer's modification of Tsuchiya's method for, (85) 1671
  albumose, Bence-Jones', in, multiple myeloma associated with, (15) 1330
  amino acid in, in health and disease, (140) 1116
  amylolytic ferments in, quantitative estimation of, (20) 1924
  black, with melanomas, (45) 324
  collection of, from female babies, *2045
  creatin, 1302—E
  creatin and creatinin eliminated from, in parturients, (71) 482
  creatinin and creatin in, in diabetes, estimation of, (73) 1028
  diabetic, dialysis of, (95) 90
  diphtheria bacilli in, (77) 327, (144) 871
  ethereal sulphates in, proportion of, solubility of uric acid in connection with, (149) 628
  excretion of amylolytic ferments in, during toxemias of pregnancy, (30) 1745
  extremes of variation of concentration of ionized hydrogen in human, (72) 1028
  fat excretion in, 1159—E
  formaldehyd in, Burnam's test for, *662
  formalin excretion in, Burnam's test, accuracy of, (32) 1740
  formalin excretion in, in children and infants taking hexamethylenamin, factors which influence, (33) 1260
  glucose in diabetics, action of lactic acid bacilli on percentage of, (87) 477
  incontinence, in children, (30) 402
  incontinence, operative treatment, (83) 950
  indican and urorosein in, clinical significance of, (81) 2072
  lipoids in, (133) 1196
  naked-eye pathology of, (71) 83
  non-toxicity of, during puerperium, (109) 1588
  organic acid ratio of, after tuberculin, (6) 699
  phenol in, after use of phenolized gauze, (152) 252
  potassium iodid in, test for, original, *1621
  residual, in old men, (68) 944
  retention, (156) 1031
  retention and chronic cystitis, drainage for, its beneficial effect on damaged kidneys, (31) 1400
  retention in kidney, operative treatment, (43) 1034
  retention in paralytics, strychnin in, (101) 794
  salvarsan in, Abelan's reaction for, 1094
  specific gravity of, in various diseases, (109) 1501
  spirochetes in, with syphilitic nephritis, (109) 406
  sugar in, during pregnancy, significance and treatment, (25) 86
  sugar in, test for, (54) 1985
  suppression, symmetrical necrosis of cortex of kidneys with puerperal eclampsia and, (21) 1837
  test for breast-milk feeding, (75) 1986
  test, Salkowski and Kojo, for diagnosis of cancer, (80) 1499
  test, urochromogen, (125) 1589
  toxic action of, in peritoneum, (89) 249
  toxicity of, in acute infectious diseases, (87) 1195
  toxicity of, in acute infectious diseases, antianaphylaxis in research on, (78) 326
  tuberculosis bacilli in, with tuberculosis of testicle, (88) 1268
  urea in blood and, constant ratio between, (42) 1400
  urea in, Folin's michrochemical method for estimation of, (94) 1327
  urea in, test for estimation of, clinical, rapid, (92) 1327
  uric acid and purin bodies in, determination of, (111) 1037
  uric acid in, method for colorimetric determination of, (78) 161, (74) 1028
  urobilin and urobiligen in, in infant, (80) 406
  urobilinogen in, functional activity of liver determined by, (112) 162, (117) 1673
  urobilinogen in, scarlet fever differentiated by, (112) 1115, (129) 1750
  urochomogen in, test for, 689, 928
UROBILIN, copper sulphate test for, (86) 1037
UROBILINOGEN and urobilin in infants' urine, (80) 406
  in urine, functional activity of liver determined by, (112) 162, (117) 1673
  in urine, scarlet fever differentiated by, (112) 1115, (129) 1750
  test for, simple, (141) 871
UROCHROMOGEN in urine, test for, 689, 928, (125) 1589
UROLOGY, (23) 166
UROROSEIN and indican in urine, clinical significance of tryptophan in feces and, (81) 2072
UROTROPIN: See Hexamethylenamin
URTICARIA, epinephrin in, (6) 1026
  in country children coming to Sydney, (12) 1668
UTAH medical news, 378, 678
UTERUS, adenomyoma, (28) 631
  adenomyoma, pregnancy with, (121) 320
  adnexa, puerperal lesions in broad ligaments and, (103) 90
  anomalies in development of, (180) 873
  anteversion, intra-abdominal myorrhapy of levator ani for, (100) 328
  behavior of, in and after third stage of labor, (146) 1406
  bicornis cause of chronic transverse presentation, (145) 1406
  blood-supply of, influence of myomas on, special reference to abnormal uterine bleeding, (85) 783
  blood-vessels, atheroma of, metrorrhagia due to, (19) 695
  cancer, (125) 242, (62) 1742
  cancer, after menopause, (91) 868
  cancer, campaign against, (77) 168, (126) 251
  Cancer Commission, Russian, report of, (117) 1038
  cancer of cervix, cautery in radical treatment, (94) 1263
  cancer of cervix, curability of, (54) 552
  cancer of cervix, cystoscopy in determining operability of, (33) 788, (52) 1111
  cancer of cervix, extended vaginal operation for, (95) 1262
  cancer of cervix, laparotomy for, (52) 782
  cancer of cervix, operation for, care of wound, (186) 563
  cancer of cervix, Wertheim operation for, results after, (96) 1263
  cancer of, in non-pregnant and pregnant, (89) 697
  cancer of, mortality from, how may we reduce? *968
  cancer of stump of, (192) 1754
  cancer, operative indications with, (40) 1926
  cancer, radical abdominal operation, (91, 92) 1262, (99) 1263
  cancer, radical operation for, (93) 1262
  cancer, roentgenotherapy of, (140) 92
  cancer, tardy recurrence of, (65) 1498
  cancer, urinary apparatus [illegible] guide to operability of, (90) 1500
  cervix, amputation of, postoperative results, (84) 1397
  cervix, diseases of, (95) 945
  cervix, lacerated, non-surgical treatment, (110) 785
  cervix, strangulation of anterior lip of, by pessary, (185) 563
  cervix, vaginal, amputation of, technic of, (25) 1033
  chorionic villi in wall of, eighteen years after last pregnancy, (16) 1185
  contraction ring as cause of dystocia, (22) 1109, (12) 1744
  curette, use and abuse of, (101) 1108
  defects in development of, and sterility, (102) 90
  discharges, bacillus, anaerobic, curved, motile, in, (38) 1106
  diverticulum of, pregnancy in, (94) 328
  double, cesarean section in double vagina and, (27) 1186
  double, twin pregnancy in, (34) 1492
  exotic flora of, in relation to fibroids and cancer, (1) 699
  fibroids, (76) 553
  fibroids complicating pregnancy, (74) 553
  fibroids, complications of, demanding early diagnosis and immediate operation, (10) 396
  fibroids, operations for, early, reasons for advising, (11) 396
  fibroids, radical treatment, based on association with malignancy, (58) 1326
  fibroids, urinary symptoms due to, (97) 1108
  fibroma, phlebitis during course of, (54) 701
  fibromas, radiotherapy for, technic and results in 193 cases, (55) 667
  fibromas, roentgenotherapy of, (125) 252, (23) 1496, (89) 1566
  fibromyoma, (71) 1589
  fibromyoma, red degeneration of, (21) 1264
  fibromyoma with unusual characters, (30) 1261
  gravid, ductless gland in, (65) 1747

UTERUS, gravid, intestines compressed between spine and, (189) 563, (44) 1839
gravid, rupture of, in cesarean section scar, (126) 1673
gravid, with myoma size of adult's head, (89) 169
hands off, (133) 252, (151) 708
hands off, in third stage of labor, (111) 1115
hemorrhage, (143) **1751**
hemorrhages after menopause, (68) **482**
hemorrhages, drug treatment, (3) 1831
hemorrhages from non-pregnant uterus, surgical treatment, (4) 1831
hemorrhages from, of newborn infants, (115) 1673
hemorrhages, pathologic, (7) 1577
hemorrhages, roentgenotherapy of, (2) **1831**
hemorrhagic disease of, roentgenotherapy or vaporization in, (147) 1751
hemorrhage disease of, thyroid origin of, (104) **1930**
hydatidiform mole in, specimen of, (38) 1745
indirect fixation of, by operations on ligaments, advantages of, (55) 557
inertia, (32) 1579
inertia, pituitary extract in, **1733**—ab
inertia, treatment, **1733**—ab
inertia, under what conditions should it be treated by artificial delivery? **1734**—ab
infected, cesarean section on, (73) 1113
influence of extra-uterine pregnancy on blood-supply of, **1736**—ab
injury of, traumatic, severe, (122) 706
innervation of, (69) 1747
instrument perforates, and pulls down tube, (88) 169
inversion, (109) **1749**
inversion, acute, (44) 86, (64) **248**
inversion, childbirth after operative reduction of, (113) **1588**
inversion, chronic, (152) 486
involution of, or care of puerperium, (41) **1028**
ligament, calcareous fibroid, large, with absence of ovaries and, (21) 695
ligament, sensitive, short, significance and treatment, (90) 242
ligament, shortening uterosacral, (65) 1107
malformations, ***174**
malformations, operative treatment, (46) 403
menstrual and intermenstrual passive congestion of ovaries and, (46) 1746
misplacement, management of, (93) 1108
musculature of fallopian tubes and, outside of organism, pharmacologic research on, (172) 562
myofibromas accompanied by pregnancy, (143) 322
myoma and sarcoma of, relation between, its bearing on roentgenotherapy, (102) **1263**
myoma (18½ lbs.) and gall bladder calculus, (52) 477
myoma of cervix, 132 cases, (147) 162
myoma, roentgenotherapy for, (166) 487
perforation of, during treatment of abortion, (93) **328**
polypi, large mass of, with myomas, (20) 556
portio vaginalis of, *investigation in relation to conception*, (41) 324
prolapse, (62) 241
prolapse, complicated by hypertrophy of cervix, operation for, (4) 1494
prolapse, gauze sponges removed from bladder and vagina and months after a Duehrssen operation for, ***1879**
prolapse, hysterectomy for cure of, (11) 1324
prolapse, in elderly woman, cure of, new intra-abdominal technic, (95) **784**
prolapse, Le Fort's operation for, (13) 479
prolapse, operations for, compared, (42) 1187
UTERUS prolapse, operative treatment, (145) **479**, (73) **553**, (50) 557
reflexes, (136) 699
retroversion and uncontrollable vomiting of pregnancy, (51) **1111**
retroversion, occlusion of intestine by, (48) **1331**
retroversions, preference of operations for, (100) 1108
retroversions, surgical procedure for, new, (15) **695**
rupture, (106) 1262
rupture, spontaneous, and pulmonary embolism, (19) 556
rupture, under pituitrin, (79) **2072**
rupture, spontaneous, at third month of pregnancy, (166) 562
rupture, with extension of intestines, (11) 864
sarcoma, (55) 1028
sarcoma, early case, (29) 1264
septic treatment, (104) 785
septus with hyperemesis gravidarum, interruption of pregnancy at 3½ months followed by peritonitis, (23) 695
suspension, Gilliam operation for, (14) 694
tumors and goiter, **1572**—ab
vein, intraperitoneal hemorrhage during labor from rupture of, (114) 1588
ventrofixation, for frequency of urination, (10) 1031
ventrofixation, mishaps from, (113) 1842
ventrosuspension, by round ligaments, operation for, ***1701**
ventrosuspension, indication for cesarean section, (127) 242
wafer's, Micajah's, **65**—P
UTRICLE, prostatic, pyuria, intermittent, due to infection of, ***1073**
UVEAL tract diseases due to auto-intoxication (16) 1395

V

VACCINATION and local anaphylaxis, ***569**
Behring's, against diphtheria, (45) **1839, 1896, 2051**—E
Besredka's method of, (22) **1744**
dangerous, neglect of, **760**
diphtheria, **1720**, (58) **1986**, (32) **2069**
for various infections with living micro-organisms, (38) **1669**
gauze as scarifier in, **1318**—C
meningitis, prophylactic, ***1289**
of cattle against tuberculosis, (34) 1330
plague, opsonic index in, (26) **1745**
pseudotubercle and plague, relationship evidenced by experiments with, (23) 1744
small-pox and, (57) 782
small-pox with diagnosis and, series of cases, (47) 160
tuberculosis, (45) **1497**
typhoid, (119) 320, **467**, (47) 1028, (35) 1330
typhoid and paratyphoid, with live *attenuated vaccines*, (19) **1109**
typhoid, as state and municipal duty, (101) 1667
typhoid, experiences with, (106) 242
typhoid, *in India, successful*, **62**
typhoid, in Maryland, (43) 944
typhoid, in United States, (45) **1331**
typhoid, in United States army, **1167**
typhoid, no excuse for insanitary conditions, **57**—E
typhoid, variations in cholesterin content of blood under, (70) 1267
with avirulent plague bacilli mixed with agar, immunization of guinea-pigs with, (110) 84
VACCINE, **465**
acne, **1074**
and vaccine therapy, (39) **477**
attenuated, live, typhoid and paratyphoid vaccination with, (19) **1109**
autogenous, ***1539**
autogenous, in diagnosis and treatment of gonorrhea in female, (81) **950**
autolysates of skin of animals yielding, immunizing action of, (144) 92
bacillus coli, **1074, 1461**
bacillus pyocyaneus, **1074**
bacterial, in acute and chronic affections, **1733**—ab
bacterial, method *for standardizing*, ***1615**
VACCINE, diphtheria, bacillus, **1461**
fever and, (1) **785**
gonococcus, **1074, 1461**
gonococcus, in gonorrheal ophthalmia, (48) 944
gonorrheal arthritis, (175) 1272
in eye infections, (11) 1664
indiscriminate use of, **289**—E
instead of serums are given in infections, why, **1727**
meningococcus, **665, 1074**
nature of serums, tuberculins and, their use in tuberculosis, (29) 1395
pneumococcus, **665, 1074, 1461**
pustule on tongue, (70) 326
pyorrhea alveolaris, (51) 82
Schafer's, do untoward results follow use of phylacogens or, **308**
staphylococcus, **665, 1074, 1461**
streptococcus, **1074, 1541**
Theobald Smith on, **1646**—E
typhoid, **1074, 1541**
typhoid, and nursing mother, **1560**
typhoid, *effect of freezing on*, (20) **1027**
typhoid, in prophylaxis and treatment of typhoid, value of, method of administration. (45) 1493
typhoid, mixed, effect of, with regard to formation of agglutinins, (21) **1027**
typhoid, prophylactic value of, (102) 320
typhoid, use of, (68) 783
uses of, attempt to interpret, ***1591**
Vancott's, (105) 161
variola, research on, (60) 867
whooping-cough, (107) 478
VACCINE-THERAPY, (111) 90, (59) 948, (29) 1033
acne, (68) 319, **390**
acne, ionic, (136) 243
and bacteriology of distemper in horses, (21) 1578
and serotherapy, (4) 1668
and serotherapy defined, ***1459**
and vaccines, (39) **477**.
articles in pamphlet form, **1903**
articles *on*, **1306**—E
autogenous, in epidemic of tonsillitis and acute arthritis, **1813**
bacterial, its indications and limitations, ***1298**, ***1360**, ***1459**, ***1539**, ***1621**, ***1704**, ***1791**, ***1880**, ***1955**, ***2046**
bronchitis, (8) 945
common colds and, (13) **1980**
current developments and problems in, **1914**—ab
erysipelas, (32) 700
erysipelas in infants, (88) 1189
gonorrhea, (91) 633
gonorrheal vaginitis, (34) **1496**
gonorrheal wart on face, (28) 1983
hay-fever, (32) 244, **1796**—E
influenza when old gonorrheal urethritis flares up, (147) 1674
of unusual infections, (51) **160**
pruritus, (54) **791**
principles and advanced methods in, (54) 398
puerperal infection, (150) **163**
pyorrhea alveolaris, (33) 239
recent work on, (38) 1110
rheumatoid arthritis, (26) **1983**
septicemia, (14) 1744
staphylococcus, improved technic, (90) 633
technic for inoculation, ***1621**
typhoid, (123) **1264**
typhoid in children, ***344**
typhoid, prophylactic, (112) 1397
whooping-cough, (5) **238**, (55) **1395**, (4) **1576**
VACCINIA and variola, etiologic relations between, (86) 558, ***1220**
blood in variola and, (134) 560
serpiginous, (83) 633
VAGINA, absence of, its reconstruction, (120) 478, (48) 557
artificial, and various procedures for correcting atresia vaginae, (28) 1745
artificial, by intestinal transplantation, (104) 242, (19) 625
bacteriologic findings, prognosis of puerperium based on, (105) 951
biologic factor in treatment, (106) **951**
cancer, primary, (58) **1111**
double, cesarean section in double uterus and, (27) **1186**
duplication of bladder, vulva and, with *successive full-time pregnancy and labor in each uterus*, (11) **946**
VAGINA, gauze sponge removed from bladder and, months after a Duehrssen operation for uterus prolapse, ***1879**
germs in, transmission to infant during labor, (181) 873
incision, pelvis examination in doubtful cases through, (48) 1741
lymphatics of vulva and, (59) 1111
obstetric laceration of roof of, (124) 1038
secretion, puerperal, streptococci in, (191) 1754
shelf for operations on rectum and, ***1537**
surgery, (46) 1395
thrombi of vulva and, and hematomas, (40) 1584
vaginofixation, mishaps from, (114) 1842
VAGINITIS, emphysematous, source of infection in, (77) 1987
gonorrheal, vaccine in, (34) **1496**
VAGOCLONIC symptoms, functional, attacks of, (153) 1406
VAGUS center, reflex stimulation of, in treatment of disease, (31) 324
nerve, circulation disturbances from sudden contraction of, (57) **702**
nerves, influence on faradized auricles in dog's heart, (43) 1261
VALETUDINARIANISM and malingering, prevention of, (4) 1582
VANADIUM, **212**—E, **225**—P
selenium in cancer, (97) 399
VANDERBILT University receives 1,000,000 dollars from Carnegie **1801**—E
VAQUEZ' disease, (16) 1399
VARICELLA: See Chicken-Pox
VARICES in Japan, (67) 1333
in pharynx, (146) 92
VARICOSE internal saphenous vein, resection of, (77) **558**
ulcers, Babcock's subcutaneous extraction method of treating, (106) 1844
ulcers, circumcision of leg for, (40) **1838**
veins, operation for, (60) **1927**
VARIOLA and poliomyelitis, (125) 1328
and vaccinia, etiologic relations between, (86) 558, ***1220**
blood in vaccinia and, (134) 560
vaccine, research on, (60) 867
VARIOLATION, historic evolution of, (21) **860**
VAS DEFERENS, roentgenography of seminal ducts and, by injecting collargol, ***800**
VASECTOMY, technic and effect on sexual intercourse, **769**
VAUGHAN, Victor, president elect, **2052**—E
VEAL, young, is it toxic? **834**—E, **1795**—E
VEGETABLE, contaminated, typhoid from, danger of, **1303**—E
diet in infant feeding, (156) 486
diet, physiologic value of, **1087**
digesting ferment, its application in infant feeding, (118) 251
medicinal value of fruits and, **147**
parasitic origin of diseases, deep injections of mercury for, (40) **862**
pulverized, (116) 636
VEIN anesthesia for operations on *hand and foot*, (48) **166**
anesthesia in 3745 cases, (49) **155**
iliac, external, thrombophlebitis of, ***1523**
iliac, left common, ligature of, in puerperal pelvic thrombosis, (17) 556
collateral circulation, (60) **325**
jugular, epithelioma inside, (82) 89
jugular, manometer findings in, (118) 91
jugular, pulsation in esophagus and, in tumor of left auricle, comparison of, (71) 1267
on hand, identification by, (100) 951
portal, malformed, *thrombosis in*, (149) 561
renal, implantation of, in vena cava in operative or other injury, (46) 947
rupture of, as industrial traumatism, (124) 407
saphenous, drainage of ascites into, direct, (69) **1333**
saphenous, internal, varicose, resection of, (77) **558**
splenic, thrombosis of, (83) **1114**
substitution of segment of, (65) 1333
urethra restored with segment of, (117) 1843

VEIN, uterus, intraperitoneal hemorrhage during labor from rupture of, (114) 1583
varicose, operation for, (60) **1927**
with arteriovenous aneurysm, importance of, experimental research on, (65) 702
VENA CAVA, implantation of renal vein in, in operative or other injury, (46) 947
inferior, occlusion of, from internal trauma, (7) **945**
thrombosis of inferior, case of, ***1878**
VENEREAL DISEASES, (66) 1742
among university students and upper classmen of high schools, **1897**
and general practitioner, (169) 163
hospital accommodation for treatment, (69) 1742
importance of, (34) 398
in army, **213**—E
in negro, special reference to gonorrhea, (66) 1922
outline for handling, **1357**—ab
prevention of, and general practitioner, (61) 782
prophylaxis, (121) 1328, (111) 1397
prophylaxis: why it sometimes fails, ***1610**
prostitution and, (65) 1327
rational treatment, (17) 689
treatment and pathology of, (71) 88
tuberculosis and, control of, helps in, (77) 553
VENESECTION, history of, (70) 863, (77) 944
in eclampsia, improved technic for, (142) **638**
in polycythemia, advantages of, (128) 1116
influence of subperitoneal injections of blood and, on red blood corpuscles, experimental study, (116) 569
plus salt infusion in skin disease, (138) 485
VENTILATION of moving-picture show as health problem, **1234**—E
of steel sleeping cars, (20) **397**
of war vessels, (124) 401
schoolroom, experiment in, (23) 1831
VERACITY, examination may be basis of opinion as to chastity but not, **545**—Ml
VERMONT medical news, **1717**
state board February repart, **1254**
VERONAL and other hypnotics, steps to check use of, **1008**
VERRUCA, gonorrheal, on face, vaccine therapy of, (28) 1983
VERRUGA, PERUVIAN, (76) 1586
comparative study in man and ape, (24) 158
VERTEBRAE: See Spine
VERTIGO, ***1514**
aural, non-suppurative, clinical and therapeutical study, (20) **244**
paracoustic, and nystagmus, (21) 81
VERUMONTANUM and prostate, diseases of, diagnosis and treatment, (62) 1028
VESICULITIS, seminal, chronic, (97) 1189
VETERINARY bulletin, tropical, **61**
VIBRIO in oriental sore, (106) 1842
non-pathogenic, properties and agglutinations of, (47) 1920
VICIOUS CIRCLE, breaking of, (6) 785
chronic, after gastro-enterostomy, especially with incarceration of loop in slit in mesocolon, (97) 483
VIENNA as clinical center, (67) 783
clinics, changes in organization, **1721**
letter, **64**, **222**, **300**, **460**, **533**, **845**, **918**, **1168**, **1240**, **1375**, **1474**, **1554**, **1721**, **1807**, **1896**, **1973**
statistical data for 1912, **918**
VINCENT'S ANGINA, frequency and importance of its recognition, (88) **399**
in children, (84) 399
salvarsan in, **69**
treatment of, (47) 944, (50) 1585
VIRGINIA medical news, **217**, **678**, **1237**, **1551**
state board December report, **854**
VIRUS, hog cholera, (43) 1106
hydrophobia, two methods for obtaining, (42) **1106**
virulent salt solution as, in manufacturing hog cholera serum, (37) 1929
VISCERA functioning, excessive, and morbid conditions in corresponding vascular system, experimental study of connection between, (71) 1113
inversion of, (80) 1747
inversion of, total, (131) 1270
transposition of, complete, ***1296**
VISCEROPTOSIS: See Splanchnoptosis
VISCOSITY, blood, influence of white blood corpuscles on, (62) 791
blood-pressure in relation to, (59) 791
blood, reduced in spontaneous gangrene, (113) **1404**
VISION: See Eye
VITALISM in practice of medicine, (66) 87, (3) 163
prevailing theories in regard to, (117) 328
VERTILIGO, case of, (70) 1493
VITREOUS, tolerance of, to dislocated lenses as index to reclination in given cases, (26) 317
VIVISECTION: See Animal Experimentation; Antivivisection
VOCAL art science from standpoint of use and abuse of voice, (66) 628
cord, paralysis of right, temporary, with sensory disturbance on left side of body, (68) **241**
training, standardization of, from teacher's standpoint, (65) 628
VOICE production and analysis, research work on, result of eighteen years of, (64) 628
production, need of standard in, (63) 628
singing, overcoming defect in, technic for, (89) 1037
VOLKMANN'S contracture, treatment, (29) **1325**
ischemic contracture of hand, (27) **1984**
VOLVULUS and perforation in multiple mesentery chyle cysts in girl of 7, (144) 330
cecum, intestinal obstruction, acute, due to, (25) **556**
intestine, in incarcerated hernia, (84) 1333
sigmoid flexure, (153) 1329
VOMICA in children, (29) 1191
VOMIT, duodenal mucus in, (66) 325
VOMITING, cyclic, in children, adrenal origin of, (32) **1926**
diarrhea with, symptoms from loss of fluids in, (56) 1402
infants, sweetened condensed milk arrests, 20 cases, (59) 1266
infants, treatment, (65) **248**, (110) **559**
infants, uncontrollable, sugar in, (60) **1498**, (35) **1926**
periodical, adrenal origin of, (62) **1266**
pernicious, of pregnancy, (18) 556, (140) **637**
pernicious, vaginal cesarean section in certain cases of, (86) 1831
pregnancy, uncontrollable, and uterus retroversion, (51) **1111**
pregnancy, uncontrollable, epinephrin in, (53) 325
pregnancy, uncontrollable, serotherapy of, (45) **403**, (154) 1117
recurrent, (51) 552
VON NOORDEN'S impression of American conditions, **64**
VULSELLUM cervix forceps, double, ***1952**
VULVA, cancer, (179) 873
diphtheria, recurring, (117) 705
duplication of bladder, vagina and, with successive full-time pregnancy and labor in each uterus, (11) **946**
elephantiasis, cesarean section and panhysterectomy in, recovery of mother and child, (14) 479
elephantiasis, tuberculous, primary, (121) **706**
lymphatics of vagina and, (59) 1111
thrombi of vagina and, and hematomas, (40) 1584
VULVOVAGINITIS, gonorrheal, in children, cause of persistence of, (8) 238
gonorrheal, serodiagnosis of, (4) 1324
in children, (4) **1104**

W

WAGE earners, national insurance of, in Russia, (94) 950
WALDEYER'S ring, pathogenicity of, relative to ear disease, (76) 1834
WAR, Austrian sanitary preparations in event of, **918**
WAR, cost of health and, **831**—ab
moral and mental training for, (99) 1397
WART: See Verruca
WASHINGTON medical news, **678**, **843**, **1237**
state board January report, **772**
WASSERMANN Reaction: See Reaction, Wassermann
WASTE: See also Garbage
WASTE, city, collection and disposal of, and public health, (12) 1492
city, sanitary disposal of, (60) 1834
WATER absorption by protoplasm, colloid-chemical theory of, ***348**
agglutination and sedimentation and their bearing on, (22) 786
analysis, guides to, **769**
analysis, standard methods of, **374**—E
bacteria in, method of counting, (34) **1984**
bacterial examination of, **1709**—E
bacteriologic examination of, standard methods for, (17) 1492
Baltimore city, effect of chemical treatment on, (32) 1325
-borne disease, prevention of, in lake and river traffic, (46) **82**
chemical study of ozone and, (156) 1198
circus freak able to ingest and expel large quantities of, (93) **1037**, (125) 1749
contaminated, pathologic dangers to domestic animals from, (35) 695
distilled, hemoglobinuria from ingestion of, experimental, (107) **328**
distilled, vs. salvarsan in syphilis, (19) **1399**
drinking, copious, and tropical residence, **611**—ab
drinking, effects on meals, **146**—C
drinking, lead poisoning from, chronic, (48) 1107
drinking, origin of goiter, arguments against, (124) 1116, (104) 1749
drinking, purification of, literature on, **1813**
drinking, radio-activity of, and endemic goiter, no probable connection between, (101) 1749
filtration, does it avert danger of typhoid? **541**
harbor, pollution of, of New York, its bearing on health, (67) 553
mineral, action of alkalines and, (165) 1675
mineral, in pediatrics, (97) 169
mineral, natural and artificial, (201) 874
mineral, radio-activity as potent element in, overestimation of, (14) 2070
New York harbor, purification of, (61) 1742
pollution and typhoid, (71) 553
potability of, how determined in temporary camps, marches and maneuvers? (112) **242**
purification, (125) 478
purification, calcium hyperchlorites for, **211**—E, (60) 1107, **1480**
purification for large cities, methods of, ***411**
purification, hyperchlorite in strength of, **466**
retention of salt, nitrogen or, in nephritis, (52) 701
spring, concentrated, Pluto, **1013**—P
spring, hot, analysis of, new, **1542**—E
sterilization of, ultraviolet rays in, (214) 1754
supply, Cleveland, sanitary condition of, (58) 83
supply, country sewage disposal and, **540**
supply in Alaska, **1851**—ab
typhoid, epidemic due to mistake in piping, **1720**
typhoid in, municipality liable for, **70**
universal beverage, (190) 488
WEBER, Rinné and Schwaback tests, prognostic value of, (82) 477
WEDGE resection of ribs to reduce size of thorax in lung tuberculosis, (165) **487**
WEIGHT and height at different ages of applicants at recruiting station, Cleveland, (158) 479
body, method of increasing, (29) 1330, (37) 1745
curve of infant in relation to food, (29) 1185
WEIL cobra venom test, **1247**, **1813**
WERTHEIM operation for cancer of cervix uterus, results after, (96) **1263**
operation, pelvic cellulitis following, (56) **247**
WEST Virginia medical news, **759**, **1237**, **1804**
state board November report, **154**
WESTERN University charged with being diploma mill, **760**
WHEAT grains, roasted, in diet for constipation, neurasthenia, heart disease, etc., (129) 1116
WHEY in catarrhal enteritis resembling dysentery, (94) 1195
in diarrhea in infants, (117) **1404**
in infant feeding, (107) 1673
WHISKY blends, **1814**
WHITEHEAD operation for hemorrhoids, 200 cases, (94) 783, (66) **1333**
WHOOPING-COUGH, (120) 1030
bacteriologic diagnosis, (76) 1671
Bordet-Gengou bacillus and, (49) **1187**
deviation of complement in, (68) 2071
nature and prevention, (136) 401
plea for better control of, ***1677**
prevention of measles and, (113) 1263
psychic factor in, (62) 404
vaccine therapy of, (5) **238**, (107) 478, (55) **1395**, (4) **1576**
WIESER, Count, an oculist, following Friedmann's methods, **1971**
WILEY, attitude of, on advertising, **1646**—E
for his old position, **68**—C
WILL power, can it be measured? (206) 564
WILM'S technic for prostatectomy, (131) 329
WILSON Brothers' gluten flour, **924**—P
Doctor, of national antartic expedition, 1910, career of, **760**
President, rises to emergency in *flood districts*, **1079**—E
WIRE, spiral, to remove diphtheric pseudomembranes, (148) **486**
WISCONSIN medical news, **218**, **296**, **378**, **759**, **1085**, **1237**, ~~**1471**~~, **1717**
state board January report, **1978**
WITNESSES, attending physicians, failure to call as, **306**—Ml
privilege and competency of, construction of amended statutes with reference to, **1829**—Ml
WOLFE graft used to correct total ectropion of upper eyelid, (85) 1580
WOMEN, appendicitis in, (81) 1927
clubs, what federation of, will do to conserve health and lives of women and children in Kentucky, (90) 1029
in industry in United States, (7) 780
in medical world, (117) 242
motorists, **597**—E
non-medical, at Berlin medical society, **141**
predisposition of, for goiter, (214) **564**
students in Germany and France, **1472**
working, effects of industrial strain on (1) **396**, **428**—ab
WOOD'S cure for drunkenness, **229**
WORK as therapeutic measure, (54) 862
graduated, in lung tuberculosis, (54) **944**
WORKMEN'S compensation act, **380**, **916**, (43) 1395, (66) *1498
compensation act, plea for medical reference versus inspection, (6) 1582
compensation and internal anthrax, (99) 1195
compensation laws and defective vision, **1075**—ab
WORMS, intestine obstruction due to literature on, **310**
screw, in nose, (114) 1667
WOUND after operation for cancer of uterus cervix, care of, (156) 563
aseptic, fever and postoperative hyperthyroidism, identity of cause and their prevention, (133) 1030
closure, postoperative treatment of laparotomy with complete, (84) 83
diphtheria and diphtheroid, (79) 1333
fever, aseptic, and postoperative hyperthyroidism, identity of cause and prevention, (27) 1831

WOUND, fresh, iodin for, (102) **1835**
  granulating, ointment in, treatment, (76) 1493
  gunshot, non-penetrating, gangrene of intestine from, (62) 477
  gunshot, of abdomen, **237**—ab, (67) 949, *955
  gunshot, of abdomen in civil practice, (63) 1493
  gunshot, of head, traumatic epilepsy after, (107) **1404**
  gunshot, of intestines, (34) 81, (100) 1029
  gunshot, of skull, treatment, (116) 328
  gunshot, produced by modern projectiles, **761**, (102) **794**, (201) 1754
  gunshot, prophylaxis of infection from, (81) **168**
  gunshot, treatment, (50) 1332
  heart, penetrating, operation for, (6) 1494
  in Balkan campaign more serious than at first supposed, **1552**
WOUND, infected, at time of injury, treatment including iodin and serums, (63) 783
  infected, suture of artery in, successful, (151) **1270**
  infection in surgery, prophylaxis of, (126) **329**
  margin after excision of saddle ulcer of stomach, closure of posterior *edges of, how to simplify* and make more accurate, (91) **784**
  paraffin in, (131) **91**
  pyelotomy, management of, (131) 1337
  stab, of heart, (68) 1402
  stab, of lungs, treatment, (58) **2071**
  suturing, technic for, (74) 249
  treatment, (189) 488
  treatment, in peace and war, (96) 1841
WOUNDED, evacuation of, organization and equipment for, (113) 242
  relief of sick and, in war, (26, 28, 30) 86
WRINKLES, atropy of optic nerve due to injection of olive oil and lanolin for removal of, (83) 553
  face, and emotional grimace, (43) 402
WRIST bones, resection of, for ischemic contracture, (136) **1502**
  injuries of, back-fire, and hyperextension, (38) 1265
  radial dislocation of, (74) 1840
WRITING, invisible, tests for, (160) 1502
WRY NECK: See Torticollis
WYETH'S collyrium, **1557—P**
WYOMING medical news, **218**, **1006**, **1085**
  state board March report, **1386**
  state board October report, **469**

X

XANTHOMA tuberosum multiplex, epithelioma of lip complicated by, (109) 629
XERODERMA pigmentosum, (103) 629
X-RAYS: See Roentgen ray

Y

YANKAUER treatment in tubotympanic trouble, experiences with, (87) 1107
YAWS: See Frambesia
YEASTS, acid-destroying, influence of certain, on lactic bacteria, **1961—E**
  action on yeast nuleic acid, (51) 318
YELLOW FEVER, condition of, throughout Mexican Republic, annual report, (13) 1184
  dissemination and prevention of, (7) **1026**
  etiology of, (128) 952
YOUNG Men's Christian Association, possibilities of concerted public health work by, (91) 1029

Z

ZONA on right and symmetrical area of purpura on left arm, (83) 89
ZOSTER, face and leg, comparison of, *1692

AUTHOR INDEX

In this Index, as in the Subject Index, the black-face type refers to reading-matter in The Journal; the light-face to articles in other journals and not abstracted in the Current Medical Literature Department. The asterisk (*) preceding the page reference indicates that the original article appeared in The Journal. The numbers in parentheses indicate the numbered paragraphs on the pages referred to, The numbers not in parentheses indicate pages.

A

Aaron, C. D., *350
Abadie, J., (50) 557, (49) **701**, (51) 1034
Abadie, P., (65) **867**
Abbe, R., (105) **1029**
Abbe, T., (87) 783
Abbott, A. W., (42) 1187
Abbott, E. G., **1817**, (67) 1986
Abbott, G. H., (48) 629
Abbott, J. C., (84) 1743
Abbott, W. J., (17) 941, (62) **1326**
Abderhalden, E., (116) **91**, (131) 1116, (117) 1196, (74, 86) 1586
Abel, K., (77) **1193**
Abell, G., (89) 1835
Abelmann, T. C. H., (71) 1666
Abels, H., (84) **868**
Abercrombie, R., (7) **785**
Abetti, M., (127) 407
Abrahams, A., (12) 2068
Abrahams, R., *1150
Abramovitz, M., *824
Achard, C., (35) 947, (47) 1034, (57) 1266, (44) **1985**
Achard, H. J., (41) 782
Achland, T. D., (55) 480
Achs-Nagy, S., (79) **168**
Adair, F. L., (137) 321
Adalid, E., (132) **407**
Adami, J. G., (81) 161, **1573**, (58) **1742**, **1911**, (25) **2067**
Adams, B. O., (12) **1394**
Adams, G. S., **1784**
Adams, H. W., (54) **696**
Adams, J. E., (24) **1109**, (24) 1496
Adamson, H. G., (12) 1032
Adcock, D. C., (39) 781
Addison, O. L., (27) 1496
von Adelung, E., (18) **1739**
Ader, H. F., (116) 162
Adie, H. A., (6) 401
Adler, H. M., (24) **625**, (31) 1186, (22) 1739, (40) 1981
Adler, S., (84) 1402
Agawa, S., (84) 249
Agazzi, B., (99) 170
Ahlfeld, F., (175) 872, (75) 1402
v. Aichbergen, A. K., (80) 168
Aichel, O., (77) 1987
Aikins, W. H. B., (61) 87
Aikman, J., (96) 1189, (24) 1191
Aime, (29) 1191
Aimes, A., (51) **1332**
Aitken, A. B., (13) **164**
Aizner, (89) 793
Akerman, J., (132) 1590
Alamartine, H., (86) **1499**, (36) 1583, (45) 1926, (43) **1984**
Albee, F. H., *1044
Albert, H., (6) 1738
Albert, L. L., (50) 1028
Albertoni, P., (149) 1502
Albert-Weil, (50) 247
Alcindor, J., (34) **480**
Alden, A. M., **1876**
Alessandi, R., (159) 1118
Alexander, E. G., (29) **1324**
Alexander, W., (74) **1035**
Alfaro, G. A., (159) **708**, (170) 1676, (213) 1754
Alger E. M., (80) 1107
Alglave, P., (18) 2069
Alilaire, E., (31) 1330
Allan, J., (17) 401, (133) 1328
Allan, W., *664, (78) 1262
Allard, E., (60) **1586**
Allbutt, T. C., (31) 86, **587**
Allegri, A., (140) 330
Allemann, A., (136) **706**
Allen, A. R., (155) **243**, (21) **1324**
Allen, C. W., (117) 162, **1488**
Allen, E. S., (51) 1493
Allen, H. W., (3) **1738**
Allen, I. O., (64) 477
Allen, M. D., *1953
Allen, W. H., **1727**
Allen, W. L., (38) 1187
Alles, E. C., (23) 244
Allison, N., (74) 477, (2) 1491
Allison, W. R., (57) 160
Allport, F., (75) 83, (147) 243, (84) 553, (146, 152) 1030, (15, 48) 1295, (82) 1589
von Almen, S. G., (60) 1922
Alperin, M. S., (140) **1197**
Alter, F. W., (89) 1107
Althoff, H., (116) **1269**
Altmann, J., (113) 1842
Altmann, K., (117) 1269
Alton, W. L. S., (13) 630
Alvarez, C., **1503**
Alvarez, M. G., (134) 952, (179) 1272
Ambard, L., (55) **324**
Amberg, E., (18) 81
Amberg, S., (51) 318
Ambrose, T., (4) 1264
Am Ende, C., (57) 1493
Amesse, J. W., (9) 1394
Ameuille, P., (72) 867
Ammann, R., (119) 329
Amoss, H. L., (34) **626**
Anders, A., (51) **1187**
Anders, J. M., **67**, **1023**
Andersen, K., (51) 948
Anderson, F. A., (10) 786
Anderson, H. B., **1915**
Anderson, J., (6) 1743
Anderson, J. F., (38) 86, (95) 555, (31) 695, **1572**, **1845**
Anderson, R. J., (74) 161
Anderson, W., (24) 1837, (22) 1983
André, P., (35) 166
Andree, H., (115) 1269
Andresen, A. F. R., (72) 628, (42) 1579
Andrewes, F. W., (5) **1190**
Andrews, A., (3) 1668
Andrews, H. R., (29, 32) 1496
Andrews, J. W., **315**
Andrews, N., (153) 1031
Andriescu, C., (35) 1330
v. Angerer, C., (149) 485
Anglada, J., (41) 1034, (54) 1497
Angus, H. B., (29) 1109
Anitschkow, N., (122) 1270, (113) 1749
Antonelli, G., (167) 1271, (81) 1987
Antoni, E., (93) 1268
Aquino, P. B., (107) **794**
Aragão, H. de B., (153) 92, (147, 151) **1406**, (84) 2072
Arany, S. A., (28) 1330
Archambault, L., (2) 474, (1) **1258**
Archibald, E., (71) **697**, (5) **2066**
Arena, G., (125) 952
Argañaraz, R., (124) 251
Argaud, R., (82) 89.
Armand-Delille, P. F., (16) 2069
Armann, W. F., (10) **694**
Armbrust, G., (130) 407
Armour, R. G., (38) 1741
Armstrong, A., **1016**
Armstrong, G. E., (22) 1105
Armstrong, W. E. M., (28) 1983
Arnaud, L., (46) 1331, (35) **1583**
Arnd, G., (75) **1036**
Arneth, (121) 1749
Arnold, F. S., (38) 1838
Arnold, H. A., (84) 864
Arnold, H. D., **775**, (12) 800
Arnold, H. L., (40) 1305
Arnold, J., (190) 563
Arnold, J. D., **539**
Arnold, W., (116) **1196**
Arnoldi, W., (80) 1671
Arnozan, X., (56, 57) **557**
Arnsperger, H., (91) 327
Arnstein, A., (61) **2071**
Aron, E., (55) **948**, (51) 1985
Aronson, H., (108) 809, (87) **1194**
Artamonoff, A., (83) **1987**
Arteaga, J. F., (203) 564
Arthur, R., (5) 322
Artz, L., (168) 562, (98) 1558
Aschenheim, E., (97) 250, (70) 1986
Ascher, F., (104) 483
Aschoff, K. L., (132) 1116
Aschoff, L., (142) 560, (96) 1037
Ashburn, P. M., *1220
Ashby, H. T., (16) 630, (6) 2067
Ashford, B. K., (5) 1025
Assmann, H., (73) **326**
Atanassiu, C. C., (58) **247**
Atherholt, G. W., (18) 1831
Atkey, O., (27) 556
Aubertin, C., (40) **789**, (42) 1191
Aubourg, P., (65) 1671
Aubrey, G. K., (44) 1111
Auer, E. M., *269
Auerbach, F., (131) **91**
Auerbach, J., (87) 329
Auerbach, S., (34) 861
Aulde, J., (44) 1982
Austin, C. K., (108) 242
Austin, J. H., (10) 624, (78) 1028, (21) 1259
Austoni, A., (202) 1754
Austregesilo, A., (180) 488
Austrian, C. R., (40) **398**, (33) **1665**
Autenreith, W., (114) 328, **1561**
Auvray, M., (39) 1497
Avery, O. T., (37) **1981**
Avite, G., (138) 252
Axhausen, G., (53) 948
Ayers, E. A., (83) 319
Aynesworth, H. T., (32) 943
Ayres, B., **1014**
Ayres, W., (60) 1922
Aytoun, J. H., (44) 86

B

Babcock, K. C., **775**
Babcock, W. W., (90) 399, (96) 1581, **1900**, (49) 1982
Babitzki, P., (103) **951**, (142) 1406, (92) 1672
Bachmann, R. A., *1154, *1610
Bachstez, E., (128) 636
Baemeister, (75) **326**, (98) 1403
Bacon, C. S., (84) 697
Badet, R., (64) 558
Badin, (65) 1671
Baehr, G., (86) 1402
Baer, B. F., (158) 243
Baer G., (73) **703**, (132) 766
Baeslock, F. W., (29, 32) **475**, (43) 1106
Baetge, P., (110) 1501
Baetz, W., *1065
Baetzner, W., (43) **480**
Baginsky, A., (76, 77) **1113**
Baglioni, G., (199) 1754
Bahr, F., (57) 166
Bailey, C. H., (42) **1832**
Bailey, F. W., (85) 161
Bailey, P., (13) 941, **1393**
Bailey, W. C., (60) 1666
Bain, W., (33) 1110
Bainbridge, W. S., (28) 1496
Baker F. C., (7) 1394
Baker, H. W., (49) 1833
Baker, M. N., (10) 1184, (11) 1402
Baker, S. J., (5) 550
Baketel, H. S., (91) 1189
Balard, P., (55) **1401**, (49) 1746
Balas, D., (66) **1927**
Balboni, G. M., (49, 54) 82, (34) 239
Baldwin, A., (27) 86
Baldwin, E. R., **1574**
Baldwin, H., (19) 239
Baldwin, H. A., (3) 316
Baldwin, J. F., (154) 162, (104) 242, (3) 316, (62) 477
Baldy, J. M., **935**
Balfour, A., (24) 787, (6) 1397
Balint, R., (106) 90
Ball, C. B., (25) 695
Ball, C. F., (114) 1923
Ball, C. P., (5) **1743**
Ballance, C. A., (9) 81
Ballenger, E. G., (61) **553**
Balliano, A., (67) 632
Ballin, M., (73) **1666**
Ballin, M. J., (49) **862**, (80) 1922
Balthazard, V., (56) 1111
Balu, A., (92) 1929
Balzer, F., (79) 1499
Bamberg, K., (173) 1753
Bamberger, A., (5) **238**
Bandi, I., (143) 330, (14) 946, (33) 1264
Bandler, S. W., (11) **158**, (23) 1027, (46) 1305
Bane, W. C., (63) 83
Bang, S., (46) 1584
Banister, J. B., (32) 787
Bankart, A. S. B., (15) 865, (19) 1583, (4) 1982
Barach, J. H., *369, (2) **1979**
Barany, R., (113) 407, (142) **707**, (86) 1672
Barbat, J. H., (70) 697
Barber, M. A., (103, 110-112) **84**, (113) 1836
Barbier, H., (47) 247
Barbour, H. G., (39) 861
Barbour, H. V., (33) 2067
Barbour, L. P., (55) **1833**
Barbour, P. F., (101) 161
Barchet, (94) 328
Barclay, W. F., (59) 627
Bard, L., (111) 794, (129) 952, (71) 1267
Bardach, B., (144) 707
Bardach, H., (124) **329**
Bardeen, C. R., **931**
Bardon, M., (40) **1838**
Bardswell, N. D., (39) **402**, (29) **480**, (30) 1109, (22) **1191**
Baright, H. E., (32) 1395
Barile, C., (104) **170**
Barjon, F., (76) 1499
Barkan, A., (51) 1326
Barkan, H., (123) **1336**, (12) 1664
Barker, A. E., (2) 555, (20) **700**, (19) 1495
Barker, B. I., (29) 1395
Barker, L. F., (13) **239**, (43) 398
Barker, O. D., (168) 163
Barkley, A. H., (53) **627**
Barling, H. G., (29) 631
Barling, S., (12) **1320**
Barlow, C. A., (151) 1030
Barnabo, V., (98) 170, (203) 1754
Barnard, H. E., (14) 1184
Barnes, B. F., (79) 864
Barnes, F. H., (52) 944
Barnes, H. L., (94) 84, **1570**
Barnes, J. H., (79) 1580
Barnes, N. P., **1913**
Barnett, C. E., (159) 162
Barney, J. D., (20) 860
Barnhill, J. F., (33) 552, (37) 1492
Baron, A., (80) 1927
Barr, J., (1) **1494**
Barr, R. A., (92) 1922
Barratt, J. O. W., (18) **786**, (27) 865
Barrenscheen, H. K., (181) 1753
Barreto, B., (196) 563, (150) 1406
Barrett, A. M., (1) 1663
Barrett, C. W., (123) **320**
Barrett, J. W., **611**
Barrett, W. E., (40) 1400
Barrie, G., (21) **625**
Barrington-Ward, L. E., (3) 479, (25) 1583
Barrow, W., (90) 1029
Barrows, C. C., (73) 553
Barsony, T., (80) 1927
Bartel, J., (77) 949, (134) 1406
Bartels, C. D., (195) 488
Barthélemy, M., (53) **701**
Bartlett, A. W., **1479**
Bartlett, C. J., *176
Bartlett, E. A., (2) 694
Bartlett, W., (12, 17) **316**, (136) 321, *511, (23) **551**, **1846**
Barton, J. L., **228**
Bartow, B., (1) **1491**, (67) 1580
Bashford, E. F., (77) 633
Bass, C. C., **1486**, (85) 1667, **1822**
Bass, F., (23) 1831
Bass, M. H., (3) 550, (14) 1258, *1608, (39) **1832**
Bass, R., (135) 92
Bassal, (39) 1926
Bassett, V. H., (115) 1886
Bassett-Smith, P. W., (15) 946
Bassler, A., *801, (69) **863**, *1283
Bassoe, P., (13) 1258
Bastian, H. C., (14) 86
Bastianelli, R., (131) **1337**
Batavyal, K. L., (31) 1669
Bates, G., (50) 398
Bates, L. B., *898
Bates, M. E., (10) 780, (67) 863
Bates, U. C., *2032
Battle, I., (106) 1189
Battle, W. H., (11) **2068**
Bauer, (108) 1195
Bauer, J., (120) 560, (138) 1674
Baughman, G., *351
Baum, (85) 327
Baumann, E. J., (41) 1665
Baumel, J., (53) **1034**
Baumgartner, E., (86) 793
Baumm, P., (61) 791
Baur, J., (158) 1271
Baux, G., (52) 403
Bayer, C., (181) **563**
Bayer, R., (99, 100) 869
Bayet, A., **919**
Bayley, H. W., (32) 1983
Bayon, H., (43) **86**
Baze, R. J., (93) 1108
Bazy, L., (34) 166, (80) 558, (44) **1400** (39) **1745**
Bazy, P., (34) 166
Beach, S. J., (38) 1579
Beall, F. C., (131) 85, (106) 320
Bean, J. W., (11) 86

Bean, R. B., (86) **159**
Beard, G. M., **900**
Beard, J., (83) 1189
Beard, S. L., (102) 1029
de Beaujeu, A. J., (53) 1746
Beck, C., (107) 1195, (174) 1753
Beck, J. C., (11) 81, (64) 398
Beck, J. E., (125) 1030
Becker, P. F., (94) 1268
Becker, W., (70) 791
Beckers, W., (55) 791, (54) 1985
Beckman, E. H., (72) 1327, (31) 1832
Beckmann, W., (152) 486
Bedeschi, P., .(157) **1118**
Bedford, P. W., (7) 1494
Beebe, S. P., **227**, **2021**
Beer, E., ***267**, (76) 628
Beer, H., (137) 92
Beers, N. T., (70) 1493
Beeson, C. F., (54) 1580, (70) 1922
Béhague, A., (64) **248**
Behan, B. J., (127) 485
Behla, R., (53) 1985
Behne, O. J. W., (193) 1754
Behrend, E. B., (44) **1832**
Behrend, M. M., (105) 869
Behrenroth, E., (88) **633**
v. Behring, E., (45) **1839**, (58) **1986**
Beissy, (72) 558
Beitzke, H., (110) 251
Bel, G. S., (115) 162
Belak, A., (77) 404
Belfield, W. T., ***800**
Beling, C. C., (108) 1189
Bell, A. J., (62) 627
Bell, F. D., (11) 1184
Bell, J. M., **1101**
Bell, J. N., (2) **157**
Bell, W. B., (35) **1265**, (10) **1329**, (20) 1399, (14) 1582
Bellis, G. L., (155) 1031
Bellows, L. W., (140) 162
Below, N. A., (98) 328
Benard, H., (57) **247**
Bendell, J. L., (30) 81, ***1537**
Bendix, B., (153) 562, (175) **1753**
Benedek, L., (135) 560
Benedict, A. L., (90) **477**, (23) 1980
Benedict, F. G., (116) 1501
Benestad, G., (151) 330
Benfey, A., (102) 1037
Benjamin, A. E., **149**, (64) 160
Benjamin, E., (155) **871**
Bennett, A. B., (82) 477
Bennett, R. A., (39) **480**
(64) 1671
thin, W., (105) **1269**
tley, B. J., (1) 629
ard, L., (45) 1926, (43) **1984**
Beresnegowsky, N., (57) 1926
Berg, A. A., ***881**
Berger, H., (133) **1405**
v. Bergmann, G., (116) 636, (75) **792**
Bergmann, J., (153) 562
Bergmark, G., (141) **408**
Bériel, L., (71) 1499, (46) 1926
Bering, F., (120) **329**, (100) **406**
Berkeley, W. N., (61) 1666, (58) 1982
Berkeley-Hill, O., (22) 1330
Bernard, (169) 872
Bernard, L., (49) 1401
Berndt, F., (83) 168
Berner, O., (124) 1270, (181) 1676
Bernhard, O., (102) **1500**
Bernhardt, G., (111) 559
Bernheim, B. M., ***360**, (25, 26) **941**
Bernheim, M., **176**
Bernheim, S., **1090**
Bernoulli, E., (106) **1930**
Bernstein, E. J., (15) 1739
Bernstein, H. S., (5) **694**, (2) 1918
Bernstein, P., (68) **1333**
Berry, J., (17, 25) 1109, (17) 1191
Berry, J. M., (127) **320**
Berry, V., (97) 1108
Berry, W. D., (89) 319
Bertarelli, E., (93, 95) 169
Bertels, A., (116) 1038
Bertelsmann, R., (148) 707
Berthaut, (61) 1402
Berthelot, A., (22) 946
Bertog, J., (136) 1750
Bertolotti, (58) 1193
Bertolotti, M., (186) 1272
Bertrand, D. M., (22, 29) 946
Bertrand, G., (38, 42) **246**, (43) **866**, (24) 946, (24) 1925
de Besche, A., (217) 564, (85) 1194
Besredka, A., (48) 1670
Best, F., (78) 1747
Betke, P. M. R., (68) 1035
Bettmann, M., (52) **1926**
Beumer, F. W. C., (76) 703
Beuttner, O., (57) 791
Bevan, A. D., **690**, ***974**
Bevan, E. W., (33) 1669
Bevers, E. C., (35) 1983
Beyer, C., (46) **1497**
Beyer, T., (166) 562
Beyer, W., (76) 326, (111) 705, (144) **870**
Bickel, A., (82) 1113
Bickel, H., (64) **404**
Bie, V., (94) 1988
de Biehler, M., (50) 1192
Bier, A., (82) **482**
Bierbaum, K., (88) 1672
Biermann, (91) **704**
Bierring, W. L., (96) **698**, (80) 1834
Bierry, H., (41) 1984
Biesalski, K., (103) **1672**
Bigelow, O. P., (47) **1741**
Biggs, H. M., (66) 1742
Bignami, A., (70) 783
Biilmann, H. S., (135, 136) 1844
Bilancioni, G., (138) 1338
Billings, F., ***495**
Bindi, F., (125) 1038
Bing, R., (90) **327**
Bing, R., (90) **327**, **2026**
Binney, H., (19) 860
Bird, M. D., (119) 699
Birdwood, G. T., (21) 1330
Birk, W., (99) **1930**
Bisgaard, A., (134) 1038
Bishop, E. S., ***431**
Bishop, L. F., ***803**, **1484**, **1913**
Bishop, R. H., (14) 1492
Bith, H., (47) 403, (52) **867**
von Bitter, G., (93) 1195
Bittorf, A., (154) 708, (139) 1750
Bitzer, A. W., (120) 85
Bixby, E. M., ***900**
Bizarri, A., (96) **169**
Bjalokur, F., (61) 1035
Björkenheim, E. A., (76) 482, (124) 1038
Blachly, C. D., (135) 699
Black, C. E., (35) 81, (52) 398, ***1698**
Black, E. H., (8) **555**
Black, J. H., ***1289**
Black, K., (7) **1108**
Black, N. M., (82) 945, (75) 1396
Black, W. T., (86) 242
Blackader, A. D., **77**
Blackham, R. J., (57) 944
Blacklock, B., (1, 2) **401**, (5) 1397
Blackwell, E. M., (125) 401
Blad, A., (163) **708**
Blair, W. W., (139) 478
Blaizot, L., (49) **1670**
Blake, E. M., (146) 243
Blake, J. B., **2023**
Blake, J. D., (44) 944
Blakeway, H., (18) 1399
Blakey, H. B., (108) 1923
Blaksley, J. A., (189) 488
Blanchard, A. H., (112) 1923
Blanchard, R., (54) 1670
Blanchard, W., **1917**
Blanco, S., (166) 1502
Blanc-Perducet, (46) 1034
Bland-Sutton, J., (1) 699
Blatteis, S. R., ***811**
Blauel, K., (75) 1333, (93) **1500**
Blech, G. M., ***122**
Blecher, A., (151) 1674
Bleek, T., (126) **706**
Bleynie, G., (41) 1584
Bloch, M., (63) 1266
Block, I., (90) 1929
Blohm, G. J., (169) 1198
Blomquist, A., (167) 1198
Bloodgood, J. C., **1737**, **2019**, **2065**
Bloomfield, A., (34) **159**
Bloss, J. R., (106) 785
Blount, W. J., (81) 783
Blue, R., **464**
Blühdorn, K., (110) **559**
Blum, L., (93) 1929
Blum, V., (5) 316, (12) 475.
Blumberg, (92) **1748**
Blume, F., (13) **158**
Blumenfeld, S. S. S., (91) **1194**
Blumenthal, M., (90) 249
Boas, H., (202) 874
Boas, I., (67) **1035**, (48) **1585**
Bock, J. C., (94) 1327
Böcker, W., (89) 1194
Bodenstab, W. H., (73) 1327
Boeckel, A., (35) 166, (37) **1496**
Boehm, E., (22) **941**
Boehme, G. F., (86) 1189
Boehncke, K. E., (125) 1116, (85) **1929**
Boeri, G., (142) **252**
Bogason, P., (93) **1988**
Bogdanovitsch, M., (65) 1927
Boggess, W. F., (49) 1261
Boggs, R. H., (108) 478
Boggs, T. R., (33) 159
Bogoras, N., (59) **1926**
Boise, E., (61) 241
Boit, (130) **1337**
Boldt, H. J., (125) 242, ***968**, (87) 1189, **1252**
Bolduan, C. F., (18) 1027, (93) **1189**
Böling, W., (59) **1986**
Bollag, K., (90) **1334**
Bolling, L. A., (27) 1920
Bolognesi, G., (48) **1497**
Bonamy, (73) 867
Bond, C. J., (9) **1329**, (5) 1582
Bond, E. D., (8) 1663
Bond, G. D., (113) 1667
Bondy, O., (177) 873
Bone, E. D., (38) 398
Bongartz, H., (82) 1402
Bonhoeffer, K., (163) 487
Bonifield, C. L., (22) **695**
von Bonin, G., (30) **556**, (8) **1748**
Bonn, H. K., (39) **1492**
Bonnaire, E., (62) 1193
Bonnamour, S., (56) **324**, (48) 1034
Bonner, H., **1810**
Bonnet, P., (48) **324**, (56) 701, (38) **1583**
Bonney, C. W., (1) 316
Bonney, V., (25) 1033, (9) 1190
Bönninger, M., (66) **1986**
Bonnot, E., (38) 1832
Bonstedt, A., (153) 871
Bontemps, H., (81) 326, (86) **1194**
Boone, J. R., .(58) 1262
Boothby, W. M., (156) 162, (8) **316**, (47) 1107
Boquel, A., (86) **89**
Borchardt, M., (148) **1117**
Borchers, E., (113) 328
Borden, C. B. C., (49) 696
Borden, W. C., **932**
Bordet, E., (50) 631
Bordier, H., (135) 252
Bornstein, M., ***513**
Boross, E., (67) 1927
Borszeky, K., (74) 1927
Bosanquet, W. C., (18) 630
Bose, C., (24) 401
Bossi, L. M., (136) 92, (134) 706, (72) 1193
Bosworth, A. W., (81-85) 1327
Botella. D. E., (215) 1754
Botella, E., (169) **1118**, (184) **1272**
Böttrich, E., (93) 1841
Bouchacourt, L., (80) **868**, (64) **1112**
Bouchut, L., (41) 1191
Bouloud, R., (39) 789
Bourne, A. W., (6) **1108**
Bourret, (70) 1113
Bouton, W. C., (20) 1395
Bovée, J. W., **151**, (7) **694**
Bovier, L., (50) 1746
de Bovis, R., (103) 90, (72, 73) 1113, (44) 1839
Bowditch, H. I., (36) **1740**
Bowen, J. T., (30) 1665
Bowes, L. M., ***173**
Bowles, F. H., (42) 160
Bowling, J. A., (90) 319
Bowman, J. G., (74) 1834
Boxwell, W., (62) 87, (5) 163
Boycott, A. E., (21) 786
Boyd, F. D., (109) 1667
Boyd, S., (16) 1582
Boynton, W. H., (114) 1836
Boys, C. E., (46) 552
Bozzotti, L., (98) 793
Braasch, W. F., ***20**, ***274**, (37) 1395
Brackett, E. G., (26) 1665, **1917**
Bradburne, A. A., (20) 1191, (88) 1580
Bradford, E. H., **774**, (4) 859, (11) 860
Bradley, B., (6) **1031**
Bradley, E. B., (98) 1029
Bradley, H. C., ***44**, (47-50) **318**
Bradner, F. W., (121) 242
Brady, A. J., (23) 81
Brady, J. M., ***972**, (29) 1185
Brady, W., (100) 629, (95) 1835
Brahm, C., (69) **1586**
Brain, C. K. **1169**
Braine-Hartnell, C., (5) **1836**
Braislin, W. C., (19) 81
Braithwaite, L. R., (11) 1982
Bramwell, B., (12) 786, (4) 1582, (10) 1982
Brand, A., (76) 1262
Brand, A. T., (31) 324
Brandenberg, F., (114) **91**
Brandes, M., (95) 559, (83) 1333
Brannan, J. W., (106) 242, (42) 1982
Branth, J. H., (88) 1667
Brasher, C. W. J., (4) 1329
Braude, M., **1910**
Braun H., (131) 560
Braun, W., (114) **869**
Brav, A., (98) 629
Brayton, N. D., (25) 1740
Breese, H., (86) 319
Breisacher, L., (64) 1035
Breitner, B., (119) **1115**
Breitstein, L. I., (53) 1326
Bremener, M., (127) **1843**
Brenizer, A. G., (79) 553, (105) 1189
Brennecke, H. A., (89) 783
Brennemann, J., (4) 550, ***575**
Brenner, E. C., **1571**
Breslauer, F., (103) **705**
Bresslau, E., (99) 406
Breton, **1065**
Bretschneider, R., (122) 706
Brettauer, J., **1736**
Breus, C., (84) **793**
Brickner, S. M., (4) 396
Briggs, J. E., (16) 1980
Brill, A. A., (48) 1982
Brin, H., (65) 558
Brinch, T., (161) 92, (148) 252, (214) 874
Brisson, H., (55) 1111, (43) **1331**
Brister, E. E., (111) 320
Bristol, L. D., (41) **1579**
Bristow, A. T., **153**, (124) 242
Broadhead, G. L., (2) 396
Broca, A., (76) 867
Brock, A. J., (29) 402
Brock. L. S., (87) 1743
Brocq,. (50) 87
Brodfeld, E., (90) 406, (103) 1269
Bromberg, P., (139) 1030
Bronfenbrenner, J., (67) **1188**
Bronson, E., (38) 861
Brooks, C. D., (44) 552, (31) 2067
Brooks, H., **301**, ***359**, **444**, (47) 627, **1483**
Brooks, O. M., (85) 1743
Brooks, P. B., (61) 782
Brooks, R. C., (9) **624**
Brooks, R. S., (26) **1744**
Brooksher, W. R., (7) 1577
Brosch, A., (88) 793
Brotherhood, J. S., ***1205**
Brotzen, S., (66) **632**
Broughton, L. E., **1387**
Broughton-Alcock, W., (38) **1669**
Broun, L., (54) 552, (52) 782
Brown, A. W., (26) 239
Brown, B. H., (77) 1580
Brown, E. F., **1169**, **1344**
Brown, E. J., ***1946**
Brown, E. M., (66) 1028
Brown, G. V., (12) 1831
Brown, H. A., (123) 162, **1174**, (55) 1982
Brown, H. B., (37) 1326
Brown, H. H., (65) 628
Brown, H. R., (53) 1187
Brown, J. E., (94) 1923
Brown, J. S., (107) 242, (85) 1189
Brown, J. Y., **73**
Brown, L., (74) 242, (50) 627
Brown, P., (45) **81**, (53) **82**
Brown, P. K., (33) 317
Brown, R., (55) 1326
Brown, R. H., (82) 399
Brown, S. H., (91) 1581
Brown, W. L., (23) 86, (48) 87, (52) 1580, **1901**
Browning, W., (47) 1395
Bruce, H. A., (46) 398
Bruce, J. M., (18) 1109
Bruce, L. C., (23) **1495**
Bruck, C., (138) 485, (112) 636, (123) 1196
Bruck, F., (131) 1405
Brückner, J. M., (92) 1037, (176) 1753
Bruegel, C., (78) 792
Brüggemann, A., (120) **1115**
Brugsch, T., (137) 560
Brumpt, E., (57) 1111, (42) 1838
Brun, H., (56) .791
Brünell, (141) **870**
Bruner, W. E., (123) 478
Brüning, H., (104) 1335
v. Brunn, M., (105) **328**
v. Brunn, W., (56) 1585, (188) 1754
Bruns, O., (80) 249, (86) 633
Brunton, L., (49) 791
Brush, E. N., (8) 1979
Bruusgaard, E., (159) **1198**
Bruyant, **1065**
Bryan, G., (23) 2067
Bryan, J. H., (24) 81, (86) 399
Bryan, W. A., (85) 242, (151) 1329
Bryant, J. D., (62) 1666
Bryant, W. S., ***878**
Buch, A., (92) **1988**
Buch, M., (154) 871
Buchanan, J. D., (5) 1264
Buchanan, J. J., (143) 162, (64) 1326, ***1343**
Buchanan, L. G. C., (140) 322
Buchbinder, J. R., ***1782**
Bucholz, C. H., (1) 1393, (3) **1491**
Buchsbaum, M., ***363**
Buckingham, E. M., (10) 1919
Buckle, L., **146**
Buckley, A. C., (85) 864
Bucklin, C. A., (110) 242
Buckner, G. D., (34) **1106**
Bucky, G., (109) 1037
v. Budisavljevic, J., (62) 2071
Buerger, L., ***419**, (118) **1328**, (63) 1493, (59) 1671
Buettner, W., (140) 707, (149) 1270
Buford, C. G., ***1281**
Buhlig, W. H., (86) 697
Bull, C. G., (51) **240**, (45) **1261**
Bull, C. P., (96) 1835
Bull, P., (96) **869**
Bullard, W. N., (52) 82
Bullock, E. S., (43) 696
Bülow-Hansen, V., (147) 330
Bulson, A. E., (33) 1492
Bumm, E., (140) **92**, (186) 563
Bumsted, C. V. R., (112) 1189
Bungart, J., (147) **561**
von Bunge, G., (205) 564
Bunta, E., ***44**
Bunting, C. H., (38) **626**

Bunts, F. E., (60) 1326
Buquet, A., (55) 1670
Burch, L. E., **1249**
Burcham, T. A., (96) **698**
Burckhardt, E. H., (95) 1749
Burdick, W., (13) **1394**
Burge, A. J., (48) 1493
Bürger, M., (76) 703
Burger, T. O., (72) 783, (147) 1030
Bürgi, E., (92) 406
Burmeister, R., (92) **793**
Burmeister, W. H., (46) **1920**
Burnand, R., (72) 1671
Burnet, E., (39) **246**
Burnett, C. T., (13) 780
Barnett, F. L., (4) 1393
Burnett, T. C., (28) **941**
Burnham, A. C., (13) **625**
Burnier, R., (32) 1583
Burns, N. B., (19) 1105, (20) 2067
Burr, C. B., (44) 1395
Burr, C. W., *43, (33) 1028, ***1054**, (50) 1921
Burrage, T. J., (37) 1579
Burrows, M. T., **1661**
Burrows, T., (69) 399
Burrows, W. F., (69) 1493
Busby, A. H., **1911**
Busch, F. C., (129) 242
Bushnell, G. E., (80) **83**, (93) 478
Bushtel, F. C., (83) 945
Buss, W., (67) 1586
Buteau, S. H., (15) **694**
Butler, A. G., (7) 322
Butler, C. A., (29) 552
Butler, C. S., (101) 1397
Butler, G. G., (31) 556
Butlin, H. T., **29**
Butt, A. P., (150) 1030
Butt, W. R., (83) 399
Butterfield, E. E., (30) 1578
Buttles, E. H., (115) 1263
Buttner-Wobst, (133) 706
Butts, H., (99) 478
Byars, C. R., **1559**
Byloff, K., (135) **1674**

C

Caan, A., (159) 562
Cabanis, (70) 1267
Cabot, H., ***16**
Cabot, R. C., **145**, (3) 1025
Cade, A., (99) **1114**, (48) 1192
Cadwalader, W. B., **1910**, (46) 1982
Caesar, G., (97) **635**
Caffrey, A. J., ***1879**
Caird, F. M., (51) 1265
Cajozzo, G., (156) **708**
Calder, D. H., (96) 84
Calderini, G., (39) 1584
Caldwell, C. E., **73**
Caldwell, R., (109) 1263
Caley, F. G., (37) 86
Calhoun, F. P., (26) 861
Caligiuri, J., (157) 1502
Callahan, C. T., (14) 1919
Calmette, A., (34) 1330
Calvé, J., (49) 247
Calve, Q., (28) 1191
Cameron, H. C., (35) 324, (14) 1668, (10) 1836
Camp, C. D., (69) **241**
Campbell, B. P., (16) 1744
Campbell, D. M., (63) 241
Campbell, H., (56, 63, 65) 87, (30, 34, 38) 324, (39, 44) 631, (31, 33) 866, (9, 13) 1923
Campbell, H. M., (148) 1030
Campbell, J. G., (59) 1028
Campbell, J. L., (24) 475
Campora, G., (139) 330
Campos, E., (198) 563
Cannon, W. B., (57) 318, **775**, ***1511**
Capece, N. C., (109) 170
Caponetto, G., (151) 1502
Cappello, G., (136) 252
Carbonel, D., (159, 165) 1502
Cargile, C. H., (126) 1836
Cargin, H. M., (42) 402
Carini, A., (195) **563**, (124) 1589
Carl W., (123) 1404
Carles, J., (56) **557**, (39) **1838**
de Carli, D., (11) 479
Carlisle, C. L., (8) 551
Carlson, A. J., (55) 318
Carlson, B., (211) 564, (142) **1388**
Carmalt-Jones, D. W., (29) 787, (33) 1983
Caronia, G., (74) **1113**
Carpenter, E. W., (105) 1667
Carpenter, H. C., (2) 238
Carpenter, J. G., (55) 627
Carpenter, J. T., (158) 243
Carpenter, W. S., (51) 627
Carr, J. W., (24) 480, (44) 1265
Carracido, J. R., (178) 1272
Carre, H., (39) 866
Carrel, A., (46) 240
Carrière, H., (86) 558
Carrieu, M., (54) 1497
Carrington, T. S., (26) 1395
Carroll, J. H., **444**, **1458**
Carroll, R. S., (122) 1030
Carson, G. R., (25) 1919
Carson, H. W., (5) 1923
Carstens, J. H., (12) 158, (62) 241, (42) 1741
Carter, A., (23) 780
Carter, C. E., (62) 1396
Carter, H. F., (3) 401
Carter, H. R., **517**
Carter, J. H., (113) 820
Carter, W. W., *728, (67) 1922
Cartwright, M., (69) 1262
Carwardine, T., (1) **555**, (28) **1832**
Cary, E., (80) **1396**
Cary, G. F. S., ***1782**
Casamajor, L., ***646**, (59) 1982
Caspari, (44) 701
Casper, L., (87) 1333
y. Cassá, J. L., (12) 1184
Castaigne, J., (32) 1033, (38) **1034**
Castellani, A., (25, 30) 165, (18) 241, (23) 787, (13) 946, (19) **1109**, (28) 1400
Castelli, E., (113) 698
Castelli, W., (40) 1579
Castellino, C., (156) 1502
Castellino, P., (170) **1272**, (139) 1338
Castellvi, J. C., (177) 1272
Castex, M., (118) 251
Castilla, C. R., (132) **407**
Castle, H. E., (66) 696
de Castro, A., (197) 563, (123) 1589
de Castro, S. V., (131) 952
de Castro Ruiz, R., (166) **1118**
Cates, B. B., (48) **1028**, (110) 1263
Cattaneo, C., (177) **1753**
Cattani, P., (77) 1036
Catz, A., (39) 947
Caulk, J. R., (62) 1028, (115) 1667
Cautley, E., (26) **1033**, (43) 1265, (8) **1836**
Cavana, M., (30) 2067
Cavazzani, E., (138) 252
Caverly, C. S., (113) 1263
Cavina, G., (122) 952
Cawadias, A., (34) 631
Cayce, E. B., (145) 1030
Cazenavette, L. L., (79) 1667
Cecikas, J., (85) 558
Cecil, A. B., ***1606**
Cecil, R. L., (17) 1259
Ceconi, A., (96) **793**, (130) 1932
Ceelen, W., (125) 1270
Césari, E., (51) 1670
Chabanier, H., (77) 867
Chabrol, E., (57) **247**
Chadsey, M., (106) 1923
Chalier, A., (71) 558, (56) **701**, (70) 867, (55) **1192**, (74) **1499**, (38) 1583
Chalier, J., (51) 631, (49) **866**
Chambard, E., (80) 558
Chamberlain, N. H., (32) 317
Chamberlain, W. B., (68) 1396
Chamberlain, W. P., **1821**, **1823**
Chambrelent, (48) 1746
Chamot, E. M., (17) 1492
Champel, (45) **1400**
Champion, J., (57) 324, (21) 2069
Chance, B., (81) 553, (72) 1262, (16) 1739
Chandler, C. E., (96) 945
Chandler, F. G., (28) 323
Chantemesse, M., (45) **1331**
Chapin, C. V., (11) 1026, (4) 1184, **1351**, **1866**
Chapin, H. D., (80) 477, **548**, (92) **629**
Chapman, C. W., (35) 1400
Chapple, H., (24) 556
Chaput, M., (51) 701
Charles, J. W., (93) 161
Charrier, A., (65) **1498**, (40) **1838**
Chase, I. C., (106) 1108
Chase, R. F., ***421**
Chase, R. G., (16) 1668
Chatard, J. A., **1822**
Chateau, (33) 1926
Chatelin, C., (46) **247**
Chatterjee, G. C., (15) 164
Chauffard, A., (43) **789**, (61) **1111**, (40) **1984**
Chauviu, E., (88) **1499**
Cheever, D., (34) **1740**
Cheinisse, L., (67) 248, (58) **702**, (77) 1671
Chelle, L., (58) **632**, (3
Cheney, F. E., (15) 47
Cheney, W. F., *171,
Chenhall, W. T., (10)
Chernoff, L. H., (96)
Chéron, H., (55) 867
Chervin, (22) 2069
Chetwood, C. H., *25
Cheyne, W. W., (12)
Chiaravaloti, L., (123)
Chiari, H., (174) 488, (
Chiari, O. M., (107, 1195
Chiarolanza, R., (142)
Chiasscrini, A., (149) 92
Chia[illegible] A., (150) 1118
[illegible] (124) 1589
Chiene, G., (14) 1330
Chilaiditis, D., (38) 1496
Child, C. G., ***894**
Child, H. T., (20) **551**
Childs, S. B., (53) 1833
Chilton, P. H., (105) 785
Chipman, E. D., (41) **160**, ***582**
Chisholm, A. S. M., ***709**, ***814**, ***884**
Chitty, H., (55) **87**
Cholmeley, W. F., (18) 946
Cholmogoroff, S. S., (89) 169
Choukevitch, H. J., (52) 1670, (27) 1926
Christen, T., (90) 1402, (107) 1749
Christian, F. L., (4) 1918
Christian, H. A., **1568**, (6) **1079**, (41) 1981
Christophers, S. R., (4) 1397
Chrom, I. P., (148) 638
Chudovszky, M., (68) 1927
Chueco, A., (108) 170
Chuprin, I., (120) **1843**
Church, O. C., (23) 1395
Churchman, J. W., (38) 1260
Chute, A. L., (17) **860**
Cinaglia, R., (120) **1589**
Citelli, S., (19) 165
Citron, J., (119) 1501, (50) 1585
Claiborne, J. H., (91) 1494, (12) 1739
Clairmont, P., (140) 1674
Clapp, C. A., ***742**, (84) 945
Clarac, G., (43) 324, (40) 1191
Clark, A. J., (54, 55) **1922**
Clark, C. F., (69) 1396
Clark, C. M., (97) 84
Clark, E., (104) **1581**
Clark, G. F., (156-159) **470**
Clark, J. C., (102) 320, (45) 1187, (92) **1262**
Clark, L. P., (81) **84**, (61) 863, (27) 1260, **1911**, (1) **2066**
Clark, P. F., ***201**, (28) 1578
Clark, T., (41) 1187, **1538**
Clark, W. I., ***508**
Clark, W. L., (86) 864
Clarke, E., (48) 1265
Clarke, H. J., (77) 88
Clarke, J. F., (94) 698
Clarke, J. J., (49, 53) 87
Clarke, J. M., (1) **1329**, (7) 1743, (11) 1923
Clarke, K. B., (17) 699
Clausen, W., (38) 1028
Clavaud, D., (49) 557
Clay, T. F., (61) 944
Claypole, E. J., (55) 241, ***1141**, ***1950**
Cleaveland, S. A., ***722**
Clendening, L., **308**, **768**, (120) 1328
Clermont, D., (37) 947, (56) **1332**, (39) 1926
Climenko, H., **1023**
Clinton, M., (87) 1494, **1573**
Clouston, T., (16) 860
Clowes, G. H. A., (129) 242
Cloyd, T. D., (143) 1030
Cluzet, J., (46) **701**
Coates, G. M., (101) 399
Cobb, F., (27) **81**
Cobb, I. G., (37) 1400
Coburn, R. C., (52) 862
Coca, A. F., (21) 396
Cocco, L., (147) 1198
Cochems, F. N., (17) 780
Cockayne, E. A., (38) 866
Cody, E. F., (17) 1105
Coe, W. H., (76) 553
Cofer, L. E., (27) 159
Coffin, L. A., (134) 162
Cohen, M., (29) 397
Cohn, F., (124) **706**
Cohn, I., (70) 944, (134) **1030**
Cohn, M., (100) 90, (127) 1501
Cohn, T., (88) 1333
Cohnheim, O., (97) **1749**
Cohnheim, P., (94) 1588
Coit, H. L., (21) 317, (4) **940**
Colbert, J. W., (56) 1028
Cole, C. L., ***122**
Cole, H. N., (24) 158, (45) 1741
Cole, H. P., (116) 85
Cole, L. G., (87) 1667
Cole, P. P., (3) **1108**
Colebrook, L., (37) **480**
Colegrove, L. R., (81) 1494
Coleman, C. A., (97) **1923**
Coleman, C. C., (21) **1324**
Coleman, J. E., (51) 160
Coleman, T. D., **1733**
Coles, A. C., (36) 1745
Coley, W. B., (6) **1104**, **2025**
Colin, (68) **1498**
ollet, (50) 482
ollie, J., (12) **699**, (31) 1110, (6) 1582
llier G. K., (75) **1580**
llier, T. J., (72) 83
in, (45) 557
n, A., (41) **701**
s, A. N., (16) 1577
D. G., (113) 1923
E. W., (89) 399
Collins, J., ***1779**, **1909**
Collins, J. R., (5) **1836**
Collins, M., (16) **551**
Collins, W. J., (3) 945, (40) 1265
Colliver, J. A., ***813**
Colwell, N. P., **690**
Colyer, J. F., (22) 1583
Combe, A., **1379**
Comby, J., (46) 557, (37) 1034
Commes, C., (49) 1746
Commons, J. R., **1572**
Compton, A. M., (25) 239
Condon, A. S., (98) 84
Condorelli, M., (103) **793**
Conlon, F. A., ***900**
Connell, D. R., (138) **85**
Connell, F. G., **148**, (78) **1396**
Connell, K., ***892**
Connell, R. E., (68) 553
Conner, L. A., (18) **158**
Connolly, J. M., (48) **82**
Conradi, E., (111) **1269**
Conradi, H., (80) **633**
Conseil, E., (49) **1670**
Conyngham, E. F., **1245**
Cook, A. R., (35) 1669
Cook, J. E., (10) **1979**
Cook, L., (18) **164**
Cooke, J. M., (136) 85
Cooley, A. M., (78) 242
Cooley, E. B., (91) **697**
Cooley, T. B., ***435**
Coolidge, A., (36) 1260
Coombs, C., (6) 1329
Cooney, H. C., (86) 1834
Cooper, J. W. A., (29) 700
Cooper, L., (6) 322
Coopernail, G. P., (136) 162, (85) 477
Cope, V. Z., (8) 1495
Copeland, E. P., (108) 1029
Coplans, M., (22) 786
Corbett, D., (30) **1745**, (20) **1924**
Corbus, B. C., ***1769**
Corbus, B. R., (57) 1107
Cordier, V., (62) 248, (83) **558**
Core, D. E., (28) 1109
Coriat, I. H., **464**, (66) 1107, (33) 1920
Cormack, J. G., (14) 1191
Cornell, E. L., (68) 1028
Cornell, W. B., (8) 1979
Corner, E. M., (5) 864, (21) 1100, (28) 1838
Cornwall, E. E., (50) 1395
Corper, H. J., ***887**, (46) 1106
Corser, J. B., (142) 478
Corson, E. R., (33) 81
Corson, G. R. S., (103) 1591
Corson-White, E. P., (45) 1982
de Cortes, A., (101) 765
Corwin, A. M., (58) 398, (113) 1328
Cosgrove, S. A., (80) 319
Costantini, G., (191) 563
Costantini, P., (121) 1589
Costobadie, H. P., (37) 1110
Coston, H. R., ***2033**
Cotoni, L., (25, 28) 1926
van Cott, E., (63) 783
Cotte, G., (49) 324, (58) 325, (86) **1499**
Cotterill, J. M., (4) 945
Cottet, J., (97) **90**
Cotton, F. J., (156) 162, (8) **316**
Cotton, H. A., **127**, **146**
Coues, W. P., (37) 398
Coulter, T. B., (80) 1580
Council, M. D., (38) 81
Courmont, J., (84) 558
Courmont, P., (50) 701, (34) 947
Courtney, J. W., (26) 625, (15) 1577
Courvoisier, L. G., (78) 1031
Cousins, W. L., (56) 1579
Coustaing, (51) 1034
Couteaud, M., (61) 248
Couto, M., (81) 89, (118) 1749
Coward, F. A., (101) 1667, (74) 1982
Cowen, R. J., (35) 1496
Cowie, D. M., (2) 89, (2) 1103
Cowley, L. M., (107) 170, (167) 1673
Cox, A. E., (30) 1260, (12) **1577**
Cragin, D., (39) 1579
Cragin, E., (108) 618
Cragin, E. B., **1734**
Craig, C. F., (16) 239, ***565**, ***1853**
Craig, F. A., (27) **695**
Crain, M. R., (116) 1263
Cramer, A., (39) 1272
Crämer, F., (150) **870**
Crandall, F. M., (11) 81
Crane, A. A., **688**
Crane, A. W., (72) 1667
Crane, C. C., (39) 160
Crane, J. H., (23) 1264
Craster, C. V., (47) 1923
Crawford, D. G., (10) 699
Crawford, H. de L., (51) 87
Credé-Hörder, C., (71) 401, (101) 572, (84) 623
Creel, R. H., ***1527**
Cremieu, R., (92) 89, (51) 247
Crenshaw, H., (25) 475
De Crespigny, C. P. C., (25) **865**
De Crespigny, C. T., (2) **1031**

Cribb, A. G., (7) 1031
Crichton, J. E., (109) 1835
Crigler, L. W., *1297
Crile, G. W., (12) 239, (80) 399, (39) 552, (20) **695**, (76) **697**, (133) 1030, **1737**, (27) 1831
Crisler, J. A., (138) 1030
Crisp, W. H., (82) 553, (54) 1833
Crockett, R. L., (92) 1494
Croft, T. G., (104) 1667
Crofton, A. C., **145**, (69) **404**, **465**, (61) 1028
Crofton, W. M., (36) 631
Crohn, B. B., (6) **238**, (9) 1025
Cronin, H. J., **615**
Crooks, F., (9) **945**
Crookshank, F. G., (59) 87, **200**
Croom, H., (29) **1745**
Croom, J. H., (28) 866
Crosby, J. H., (38) 1395
Cross, H. D., (56) 696
Crothers, T. D., (133) 85, (126) 1030, (3) 1258
Crotti, A., ***117**, ***571**
Crow, G. B., (50) 1921
Crowe, H. W., (25) **1983**
Crowder, T. R., (20) **396**
Crowell, B. C., (107) 84, (93) **554**, (105) 1581
Crowther, C., (171) 1272
Cruet, P., (33) **788**, (52) **1111**
Crumbine, S. J., **222**, **539**
Cruz, B. G., (105) 170
Cubbins, W. R., (101) 1262
Cuica, M., (35) 1330
Cullen, T. S., **1251**, (93) **1262**, **2020**
Culler, R. M., ***415**
Culp, J. F., (100) 1581
Culver, G. D., ***1692**
Cummings, R. S., ***1936**
Cummins, W. T., (58) **1187**, (24) 1919
Cumpston, J. H. L., **383**
Cumston, C. G., (10) **474**, (52) 696, (26) 1027, (94) 1189, (27) 1324
Cunning, J., (6) 864
Cunningham, J. C., (29) 1740
Cunningham, J. H., ***13**, (26) 81, (34) 398
Cunningham, R. L., (22) 158
Cunningham, W. P., (73) 944, (94) 1835
Cuntz, W., (97) **1403**
Curle, D., (75) **88**
Curran, G. R., (27) **781**
urrie, D. H., ***183**
A. H., (38) **1106**
urtis, E. C., (57) 782
rtis, F., (32) 1400
urtis, H., (59) **696**, (1) **1025**
ushing, H., **1910**
Cushny, A. R., (86) 1748, (53) **1922**
Cuttat, G., (42) 166
Cuturi, F., (117) 1843
Cyriax, E. F., (40) 1746, (17) 1924
Czyborra, A., (146) 1751
v. Czyhlarz, E., (75) 703

D

Dabney, V., (112) 1030, (1091) 1328
Dagaew, W. F., (142) **1750**
Dahlgren, K., (140) 1406
Dakin, H. D., (77) 161, (62) 318, (81) 1028, (97) 1327, (40, 49) 1665
Dalché, P., (68) **482**
Dale, H. H., (35) **861**
Dalimier, R., (20) 2069
Dal Lago, G., (172) **1272**
Dallavedova, R., (122) 1589
Dally, J. F. H., (30) 1033
Daly, R. R., (28) 861
Daly, W. S., (93) 1494
Damask, M., (187) 1753
D'Amico, V., (188) 488
Dana, C. L., **162**, (105, 123) 242, (64) **1666**
Daniel, C., (121) **705**
Daniel, P., (11) **1032**
Danielson, W., (151) **1270**
Danis, R., (50) 403
Danziger, E., (54) 1395
Dardel, J., (88) 477
Darling, S. T., (17) **396**, (8) **1184**, ***1220**, (29) 1578, (3) **1979**
Darnall, W. E., (8) 1831
Dartigues, (73) 867
Daspit, H., (78) 1667
Dastre, (46) 1746
Dauber, J. H.; (46) 1265, (101) 1588, (105) **1842**
Dautwitz, F., (114) 951
D'Avack, A., **1911**
Davenport, C. B., 1034
David, I., (36) 1034
David, O., (123) **560**, (80) 2072
Davies, F., (59) 1666
Davies, H. M., (27) **323**
Davis, A. B., (34) **157**
Davis, B. B., **314**
Davis, D. J., (30) **475**, (36) 1106, (41, 45) **1920**
Davis, E. D., (9) 555
Davis, E. N., (41) **1028**
Davis, E. P., (145) 162, (15) 396, **1022**, (18) 1185, (5) 1831
Davis, F. L., (93) 242
Davis, G. E., (12) 81
Davis, H., (9) 1982
Davis, J. S., (81) **944**, (9) **1104**, (34) **1325**, (28) **1980**
Davis, M. M., (44) 1326
Davis, N. S., **1726**
Davis, O. C. M., (2) 1108
Davis, P. W., (109) 698
Davis, W. H., (8) 780, (3) **1103**
Dawes, S. L., (4) **694**, (4) 1738
Dawson, W. R., (21) 1264, (41) 1265
Day, E. W., (81) 1396
Day, G. H., (75) 1189
Day, H. F., ***1952**
Deak, S., (135) 560
Dean, L. W., (84) 161
Dearholt, H. E., (83) 242
Dearman, W. A., (63) 944, **1485**
Deaver, J. B., ***1**, ***262**, **395**, **795**, (110) 1189, (5) 1258, (32) **1832**
Debeyre, A., (36) 1496
De Bonis, V., (145) 1197
Debove, (82) 1499
DeBuys, L. R., (9) 238
v. Decastello, A., (68) 1586
Decherd, H. B., (98) 1397
Decker, (113) 1335
de Dominicis, A., (83) 868, (185) 1272
Deeks, W. E., ***38**
De Garay, A., (165) 1118
De Graeuwe, (56) **1670**
De Haas, N., (62) 1107
Dehio, K., (117) 328
Dejerine, J., (63) **1112**
de Kraft, F., (96) 629
de la Cruz Correa, J., (127) 1038
de Lange, C., (82) 1402
Delaup, S. P., (68) 944
De Lee, J. B., **538**
Delepine, S., (20) 401
Delfino, E. A., (46) 324, (110) 1404
Delfino, V., (190, 191) 488, (161) 708, (108, 112-114) 794, (200, 201) **874**, (130, 132, 133) 952, (128) 1038, (156) 1198, (165) 1675, (171, 173) 1676, (214) 1754
Delille, P. F. A., (67, 68) **1112**
Dellepiane, A., (151) 92
Delore, X., (35) **1583**
Delorme, E., (60) 1111, (44) 1331, (45) 1746
Delorme, M., (29) 1583
Delrez, L., (45) 866
De Lucchi, G., (145) 638
Del Valle, D., (131) **407**
Demmer, F., (91) 406
Dempsey, J. G., (69) 944
Dench, E. B., (16) 81, (73) 242
Deneke, T., (82) **1194**
Deniges, G., (35) 700
Denis, W., (56, 57) **318**, (31) 626, (74) 1028
Denk, W., (44) **166**
Denker, A., (129, 140) 560
Dennett, R. H., (131) 1328
De Normandie, R. L., (22) 1492
Denslow, F. M., (36) 781
Denyer, S. E., (27) **1583**
Deppe, L., (101) 250
Depree, H. T., (20) 1668
Dercum, F. X., (31) **861**, (68) 863, ***1057**
De Renzi, E., (173) 1272
Derganc, F., (121) 1038
De Sandro, D., (141) 252, (169) 1272
De Savarel, L., (45) 631
Descomps, P., (19) **2069**
Desgouttes, L., (68) **1266**, (73) 1499
Desmarest, E., (96) **90**, (48) **140**
D'Espine, (45) 790
Desqueyroux, (65) **867**, (53) 1192, (47) **1331**
Dessauer, F., (102) 250, (72) 1586
Destot, E., (61) 632, (72) 1499
De Swietochowski, G., (27) **1983**
De Tarnowsky, G., ***1221**
Detwiler, A. K., ***1225**
Detwiler, E., (103) 1923
Deutsch, F., (133) 1674
Deutsch, H., (129) 636
Deutschländer, C., (150) **1270**
De Verteuil, E., (6) 1494
Devic, (41) 557
Devraigne, L., (58) 867
Dewey, K. W., (44) **1106**
Dewey, R., (15) 551
De Witt, L. M., (33) **475**, ***887**
Dey, W. P., (113) 400
Deycke, (83) 792
Dial, J. J., (80) 1743
Dias, E. C., (84) 2072
Dibbelt, W., (101) **1403**
Dick, G. F., (36) **475**, (40) **1106**
Dicken, W. E., (132) 478
Dickenson, J., (124) 478
Dickey, J. L., (108) 785
Dickinson, G. K., (62) 1493, (64) 1742
Dickinson, R. L., **588**
Dieffenbach, R. H., (69) 319
Dienst, A., (108) 328, (102) 406 (86) **868**
Diesing, (101) **1403**
Dietl, K., (68) 632, (99) **950**
Dietrich, A., (166) 1753
Dietrich, S., (112) 1842
Digby, K., (36) 1838
Dight,, W. B., (2) 1264
Dighton, A., (35) 1110
Dilger, A., (102) 705
Diller, T., (146) 479
Dimitriou, (84) 1499
Dind, (57) 1332
Disqué, L., (136) 870
Dittler, R., (121) **1115**
Diuski, K., (48) **948**
Diwawin, L. A., (132) 330
Dix, P. C., (94) 1029
Dixon, A., (54) 477
Dixon, G. B., (12) **1582**
Dixon, J. T., (57) 1262
Dixon, S. G., ***993**, ***1294**
Dixon, W. E., (33) **480**, (22) 1837
Doan, H. H., (98) 478
Doazan, J., (46) **866**
Dobbertin, R., (65) 791, (69) **1333**
Döbeli, E., (105) 1037
Döblin, A., (178) **1753**
Dobrotworsky, B., (144) 1674
Dobrowolskaja, N., (70) 1402
Dock, G., **1821**, (100) 1835
Dodd, V. A., (137) 243
Doederlein, T. O., (121) 320
D'Oelsnitz, (53) 247, (27) 1191
Doherty, C. E., (18) 551
Doinikow, B., (120) 1673
Dold, H., (110) 90
Dolgopol, B. M., (183) 488
Dollinger, B., (76) 2072
Dominguez, M. M., (122) **251**
Don, A., (44) 1670
Donald, R., (34) **1983**
Donald, R. M., (123) 1328
Donati, A., (125) 1405
Dor, L., (92) 554
Doran, A., (10) 946, (20) 1033
Dorendorf, H., (25) 2069
Döri, B., (116) 407
Doroff, L. A., (96) 1667
Dorr, R. C., (41) 240
Dorrance, G. M., ***1416**
Dorworth, C. V., (111) 1030
Dotner, G., (89) 1114
Doty, A. H., (28) 159, (83) 1922
Douglas, A. G., (119) 400
Douglas, C. J., (78) 1493
Douglas, G. F., (123) 85
Douglas, J., (3) 396
Douglas, J. S. C., (8) 243
Doulai, J., (37) 631
Dowd, C. N., (33) 1832, **2025**
Dowling, O., (138) 322, (116) 400, (78) **783**, (84) 1667
Downes, W. A., (31) 1395
Doyle, S. B., (58) 1395
Draper, G., (22) **1578**
Draper, J. W., ***20**
Dreesen, H., (88) 406, (113) **1673**
Dreesmann, H. H., (92) 327, (109) **1115**
Dreisbach, E., (115) **1335**
Drenford, G., (99) 1189
Drennan, F. M., (55) 318
Drennan, J. G., (6) 1831
Drew, D., (20) 946
Drews, H., (57) 1839
Drexel, A., (109) 629
Dreyer, A., (95) 1929
Dreyfus, G. L., (117) 1269
Dreyfus, L., (64) 867, (38) 1191
Drinkwater, A., (35) 398
Drugg, W., (64) 949
Drummond, D., **1682**
Drummond, H., (22) 1495
Drury, H. C., (11) **1582**
Dschunkowsky, E., (97) 1114
Dubois, (84) **950**
Du Bois, C., (89) 558
Dubois, M., (108) 705
Dubois, P., (77) 249
DuBois, P. L., ***820**
Dubourg, E., (41) 246
Duckworth, D., (13) 1032
Ducroquet, C., (58) 1746
Dudfield, R., (41) 631
Dudley, H. W., (81) 1028, (49) 1665
Dugan, R. C., (38) **477**
Duhot, E., (54) **1266**
Dührssen, A., (39) 2070
Duke, J. W., (85) 319
Duke, W. W., (23) 396
Dulaney, O., **1249**
Dumont, F. L., (78) 1840
Dumont, L., (39) **701**
Dunbar, A. W., (122) 400, (56) 944
Duncan, C. H., (90) 84, (125) 162, (12) 940
Duncan, H. A., **473**, (78) 944
Duncan, L. C., (111) 242, (92) 478, (89) 1189
Duncan, R. B., (127) 401
v. Dungern, E., (129) 485
Dunham, J. D., (98) 242
Dunlap, E., (108) **1667**
Dunn, A. D., (15) 239, **1101**
Dunn, C. H., (26) 551
Dunn, J. S., (111) 1923, (18) **1924**
Dunn, R. H., (135) 401
Dunning, W. M., (82) 1107
Dunsmuir, R., (18) 556
Dunton, W. R., (54) 862
Dünzelmann, E., (185) **873**
Dupuich, (85) 1499
Dupuy, H., (136) 1030, **1487**, (83) 1667
Durante, G., (62) 1193
Durel, W. J., (120) **1836**
v. Düring, E., (95) 1841
Duroux, E., (47) **324**, (65) 482, (64) 632, (91) 1500
Durrett, L. P., (31) 781
Dusciau, I., (52) 324
Dutoit, A., (57) 1586
Dutton, A. S., (32) 324
Duval, C. W., (39) **1981**
Duvergey, J., (54) 701
Dwight, C. G., ***1951**
Dwyer, J. G., (11) 1664
Dyer, I., (109) 400, (48, 56) 552, **934**, (74) **1922**
Dynan, N. J., (90) 1667

E

Eagleson, J. B., (59) 1396
Earl, G., (9) 2066
Earl, R., (67) 160
Earnest, J. G., (34) 1492
Earp, S. E., (30) 1106, (52) 1395
Eastman, A. C., (27) 551
Eastman, H. A., (28) 2067
Eastman, J. R., **148**, (77) **1396**
Eaton, P. J., (42) 81
Ebeling, A. H., (24) **941**
Eberhart, F., (88) 169, (136) 330
Eberle, D., (50) 166
Eberle, E. G., (11) 1577
Ebright, G. E., ***1278**
Eccles, R. G., (46) 944
Eccles, W. M., (12) 1264
Eckel, G. J., (81) 1107
Eckert, (121) 1931
Eckhart, G. G., (26) 1920
Edberg, E., (133) **1590**
Eddowes, A., (45) **1670**
Eddy, N. B., ***1296**
Edelstein, F., (67) 2071
Eden, T. W., (34) 86
Edgar, C. L., (114) 1667
Edgar, J. C., (11) 694, **1733**
Edgett, C. E., (39) 1741
Edgeworth, F. H., (3, 8) 132
Edie, E. B., **615**
Edie, E. S., (4) **401**
Edinger, L., (86) 1672
Edington, G. H., (12) **1190**,
Edmonson, J. N., **1389**
Edmunds, A., (23) 865
Edson, C. E., (61) 83, (37)
Edwards, J. F., (30) 159, (
Edwards-Schenck, W., ***827**
Edzard, D., (122) 484
Egan, E., (106) 90
Eggert, F. C., (66) 1834
Eggleston, C., (94) **319**,
Egleston, W., (76) 1982
Eguchi, T., (107) **1404**
Ehinger, C. E., (29) 159
Ehlers, (166) 1198
Ehrenreich, S. G., (113) 4
Ehrlich, F., (84) 1747
Ehrmann, R., (75) **633**, (
Eichhorst, H., (72) **949**
Eichler, (137) 485
Eichmann, E., (80) **792**,
Eijkman, C., (159) 1752
Eiken, T., (135) 1038
Eikenbary, C. F., (61) **1**
Eiker, B. L., (95) 698
Einhorn, M., (62) 325, (
v. Eiselsberg, A., (81) 4
Eisen, P., (126) 1264
Eisenbrey, A. B., (153)
Eisendrath, D. N., **315**,
Eisenheimer, A., (97) 1
Eisenstaedt, J. S., ***27**
Eisler, F., (53) 2070
Ekehorn, G., (138) **408**
Ekler, R., (114) 1931
Elder, O. F., (61) **553**
Elfer, A., (99) 1749
Eliot, H., (43) 1034
Eliot, L., (132) 1836
Elkington, J. S. C., (
Ellermann, V., (150) (63) 791
Ellern, H., (121) 560
Elliott, G. R., (32) 8
Elliott, J. B., (57) 15
Ellis, A. G., **473**, (31)
Ellis, J. N., (30) 149
Ellsworth, S. W., ***1**
Elmore, B., (162) 47
Elmslie, R. C., (15)
Els, H., (90) 868
Elsaesser, A., (96) 1

Elsberg, C. A., **1819, 1909**
Elschnig, A., (143) 243, (138) 560
Else, J. E., (67) 783
Elsner, H. L., (3) 624, (79) 1107, **1572**
Elten, M., (95) 328
Ely, L. W., (64) 83, (110) 869
Embleton, D., (31) **631**
Emerson, C. P., (30) 552
Emerson, F. P., (36) 398
Emerson, L., (111) 1189, (107) 1328
Emerson, L. E., (36) 1665, (34) 1920
Emery, G. C., (110) 1835
Emery, W. D., (31) 700
Emmerich, E., (87) 1672
Emmerich, M., (73) 1586
Emmerich, R., (67) **167**
Emrys-Roberts, E., (3) 699
Emsheimer, H. W., ***1864**
Emshoff, E., (111) 251
Enebuske, C. J., (133) 1844
Engel, C. S., (76) **1193**
Engel, S., (105) 1195, (102) 1335
v. Engelhardt, (133) 91
Engelhardt, L., (74) **1267**
Engelhorn, E., (111) 1335
Engelmann, F., (100) **1195**
Engelmann, W., (33) 1745
Englander, S., (95) 1923
Ephraim, A., (82) 1671
Epstein, A. A., (44) **1261**
Epstein, E., (103) **1842**
Epstein, J., (80) 1262
Erdelyi, P., (78) 704
Erdman, B., (30) 1920
Erdman, S., (12) **1258**
Erdmann, C. C., (79) 1023
Erkes, F., (82) **482**
Erlacher, P., (91) 633
Erlanger, J., (23) **1259**
Erlenmeyer, A., (84) **1929**
Erlenmeyer, E., (134) 560
Erne, F., (110) 1269, **1561**
Ernst, N. P., (129) 1589
Esch, P., (144) **561**, (81) 792
Eskridge, B. C., (101) 1108
Eskuchen, K., (104) 328
Estes, W. L., (154) **243**
Estor, E., (37) 1926
Etheridge, F. L., (19) 86
Etienne, E., (42) **1984**
Etienne, G., (50) 866, (39) 1191
Eustace, A. B., (13) 316, (63) 398
Eusterman, G. B., (48) **1580**
Eustis, A., (112) **162**
Evangelista, A., (121) 952
Evans, A. J., (42) **1265**
Evans, W. A., (22) 551, **919**
Evans, W. H., (36) 402
Eve, F., (57) **87**
Everall, B. C., (87) 161
Exler, (76) **949**
Ewald, C. A., (88) **327**, (108) **559**, (88) **1114**
Ewald, P., (98) 1114
Ewart, W., (10) **322**
Ewing, J., (32) **1981**
Exner, A., (171) 872
Eyman, H. C., (10) 551
Eyster, J. A. E., (21) 1739
von Ezdorf, R. H., (144) **1329**

F

Faber, K., (150) **638**, (187) 1272
Fabre, P., (70) 1113
Fabyan, M., (34, 35) 1981
Facchin, A., (197) 1754, (82) **2072**
Fagge, C. H., (23) 1837
Fagiuoli, A., (174) 1272, (141) **1338**
Fago, M., (160) **1271**
Fahr, T., (114) 251
Fairbank, H. A. T., (31) 1745
Fairchild, D. S., (71) 1834
Falcão, S., (115) 794
Falcone, R., (206) 1754
Falconer, J. L., (12) 243
Fales, H. L., (47, 48) **240**, (39, 40) 626
Falk, H. C., (61) 1262
Falta, W., (54) 404, (78) 1193
Fantham, H. B., (7) 401, (2) 1397
Farbach, H. J., (56) 1262
Färber, E., (93) 483
Farbian, J. J., (39) 1395
Farenholt, A., (157) 479
Fargnoli, G., (200) **1754**
de Faria, G., (198) 873
Faria, J. G., (44) 557
Farini, A., (192) 563
Farmachidis, C., (168) 1271
Farmer, A. G., **1812**
Farnarier, G., (67) 558
Faroy, G., (46) **1192**, (23) 1925
Farr, C. B., (20) 317
Farre, V. M., (206) 564
Farrell, T. H., (137) 162
Farrell, W. D., (37) 477
Fasano, M., (161) **1118**, (159) 1502
Faucett, P. H., **1248**
Faught, F. A., ***279**
Faulhaber, (112) **1930**
Faulin, M., (155) 92
Fauntleroy, A. M., (10) 316
Faure, J. L., (40) 1926
Fauser, A., (74) 404, (63) **949**, (110) 1335
Faust, J., (99) **635**
Faust, L., (78) 1107
Favill, H. B., **777**
Favre, M., (50) 1746, (47) **1926**
Fay, J., (23) **1919**
Fay, O. J., (34) 1187, (81) 1834
v. Faykiss, F., (80) 1333, (75) 1927
Fayol, (45) **1400**
Fearis, W. H., (34) 1400
Fedde, B. A., (56) 1493
Fehling, H., (107) **1115**
Feiber, (147) 870
Fejes, L., (87) **1402**
Feldt, A., (100) 1403
Feliziani, F., (166) 1271
Fenger, F., (63) **318**, (46) **1665**
Fenwick, E. H., (46) 480, **825**
Ferguson, A. E., (56) 477
Ferguson, A. R., (32) 402
Ferguson, E. C., (55) 160
Ferguson, J. H., (14) 536
Ferguson, R. H., ***1858**
Ferguson, R. T., (88) 945, (103) 1667
Ferguson, W., (101) 399
Fernandez, J. S., (25) **397**, (175) 1676
Fernandez, O., (129) 1038
Fernandez-Caro, A., (110) 794
Fernando, M., (164) 1675
Fernau, (124) 636
Fernet, C., (54) 324
Ferran, J., (48) 866
Ferrannini, L., (102) 170
Ferrari, E., (141) 1674
Ferrell, J. A., (25) 1831
Ferrin, E., (70) 867
Ferro, C., (161) 1675
Ferron, J., (45) 701, (42) 1034, (43) 1400
Ferron, M., (66) 867
Fesenmeyer, F., (68) 702
Fessenden, C. H., **146**
Fetherston, J. T., (23) 230
Fetterolf, G., (7) **624**
Fiaschi, P., (12) 86
Fiaschi, T., (2) 322
Fibiger, J., (52) **948**, (94) 1748, (130) **1844**
Fieber, E. L., (116) 1931
Fiedler, (215) 874
Field, C. E., (79) 628
Fieux, G., (45) **403**, (63) 1402
Figueira, F., (42) 557
de Figueiredo, C. B., (105) 170
Figueroa, S., ***1042**
Filderman, (54) 1034
Fillol, J. C., (167) 1502
Finckh, A. E., (4) 85
Finckh, L., (128) 1501
Findlay, L., (24) **1330**
Findley, P., (8) **158, 1101, 1737**
Fine, M. S., (29) 626, (7) **1738**
Finger, E., (131) **1674**
Finizia, P., (97) **793**
v. Fink, F., (106) 1588
Fink, L. G., (26, 29) **165**
Finkelstein, H., (122) 1931
Finney, F., (119) 320, (52) 1833
Finsterer, H., (94-98) **483**, (126) 636, (135) **1501**, (153) **1751**
Finzi, N. S., (27) 700, (24) 1664
Fischer, A., (69) 1927
Fischer, C. S., (70) 628
Fischer, E., (160) 487
Fischer, G., (128) 699
Fischer, J., (88) **1402**
Fischer, L., ***279**, (45) **862**, (5) **940**
Fischer, M. H., ***348, 689, *1682**
Fischer, O., (119) 636
Fischer, W., (68) **326**, (127) 1270, (69) 1840
Fischkin, E. A., (67) 1834
Fischl, R., (96) 1269
Fischler, F., (82) 249
Fish, G. H., (84) 1107
Fishbein, M., ***737**, (35) **1106**
Fishberg, M., ***962**, (90) **1835**
Fisher, E. D., **1818**
Fisher, I., (52) 627
Fisher, J. W., (76) 83, (17) **1980**
Fisher, W. A., (148) 242, (32) **552**
Fishman, C. J., (125) 629
Fiske, C. N., (15) [illegible]
Fiske, E. W., (19) **1492**
Fitch, R. R., (5) [illegible]
Fittipaldi, E. C., [illegible] **1271**
Fitz, R., (15) **1259**, (17) **1739**
Fitzgibbon, G., [illegible] 1184, (19) [illegible], (24) **1496**
Fitzwilliams, D. C. L., [illegible]
Flath, E., [illegible] **635**
Flatow, L., [illegible] **870**, [illegible]
Fleischmann, P., [illegible]
Fleischmann, E., [illegible]
Fleischner, E. C., [illegible]
Fleisher, M. S., (48) **627**, ***1577**
Fleming, A., [illegible]
Flesch, M., [illegible]
Flesinger, C., [illegible]
Fletcher, C. G., [illegible]
Fletcher, E. A., (156) 1031
Fletcher, F., (95) **783**
Fletcher, R., (10) 401
Flexner, A., **690**
Flexner, S., ***201, *362**, (27, 28) **1578, *1937**
Flint, E. T., (49) 1107
Flint, J. M., ***1224**
Flood, E., (16) **551**
Flörcken, H., (98) **250**
Flower, N., (2) 785
Floyd, C., (23) 317
Fly, T. M., (43) 1028
Focke, W. O., (117) 1501
Foerster, O., (85) **633**, (67) 867
Foix, C., (50) **324**, (90) 558, (35) 947, (47) 1034, (60) **1332**
Foley, H., (27) 916
Folin, O., (78, 80) **161**, (56, 57) **318**, (31) 626, (74) 1028
Folliet, L., (75) 1499
Fonvo, J., (81) 1927
Foord, J. A., (21) 1492
Foot, N. C., (50) **240**, (2) 1576
Forbat, A., (117) 1749
Forbes, A. M., (131) **320, 1817**
Ford, C. S., (40) 81
Ford, J. H., (113) 242
Ford, W. W., (41) 398, (37, 38) 831, (66) 1188, (32) 1325
Fordyce, J. A., **2022**
Forgue, E., (42) **1984**
Fornaca, L., (141) **330**, (57) **404**
Forschbach, (179) 1753
Forsee, C. G., (74) 1189
Forssner, H., (63) 702, (189) 873
Fort, A. G., (59) 1834
Fortescue-Brickdale, J. M., (2) 1923
Fortun, E., (200) 564
Foscarini, R., (116) 951
Fossati, V., (175) 1272
Foster, N. B., (21) **158**
Fothergill, W. E., (4) 1494
Fougerousse, H. L., (81) 1667
Foulerton, A. G. R., (28) **787**
Foulkrod, C., (20) 1185
Fowelin, H., (137) 1197, (67, 68) 1402
Fowell, P. H. C., (32) **556**
Fowler, A. L., (71) 83
Fowler, E. P., (131) 162, (105) 1328
Fowler, O. S., (21) 475
Fowler, R. H., (103) 242, (75) 553, (29) 1832
Fowler, R. S., (84) 83, (79) 319
Fox, G. H., (98) 1328
Fox, H., ***1420**
Fox, J. H., (22) 2067
Fox, J. S., (101) 478
Fox, L. W., (114) 243
Fox, R. F., (18) 323
Foxworthy, F. W., **1975**
Foy, L. H., (7) 85
Fraenkel, A., (171) 872, (110) 1673, (53) **1839**
Fraenkel, D., (119) **870**
Fraenkel, E., (64) 1840
Fraenkel, L., (68) 1747
Fraga, C., (126) 1589, (211) 1754
Franchini, G., (144) **252**
Francine, A. P., **395**, ***717**, (63) 863, **1570**
Francisco, H. M., (64) **1262**
Franck, E., (94) 950
Frank, (109) **328**
Frank, E., (32) **1585**
Frank, E. A., (94) 1195, (117) **1404**, (107) 1673
Frank, E. R. W., (109) 1037
Frank, L., (25) 1185, (135) 1750
Frank, R., (133) **1588**
Frank, R. T., (49) **1395**
Frankau, C., (19) 946
Franke, F., (125) 637
Fränkel, E., (110) **1749**
Fränkel, J., (108) 1235
Frankhauser, F. W., (72) 1982
Frankl, O., (77) **168**
v. Frankl-Hochwart, L., (130) 91
Franklin, A., (65) 1256
Franklin, C. P., (137) 478, (126) 699, (19) 1989
Franz, N., (129) 1674
Franz, R., (139) **485**
Franz, V., (128) 570
Fraser, F. C., (20) **1669**
Fraser, F. R., ***201**
Fraser, G. C., (23) **323**
Fraser, J., (3) **1494**, (15) 1661
Fraser, J. S., (20) 491, (13) 786, (15) 865, (30) **941**
Fraser, R. C., (47) 552
Frattin, G., (104) 951
Frazer, T., (121) **1826**
Frazier, C. H., (18) 229, (12) **625**, (129) **1329**
Frederick, M. W., (27) 317
Fredet, P., (79) 1151
Freeburg, H. M., (63) 163
Freeman, F. M., (49) 1492
Freeman, J. E., (32) **477**
Freeman, L., ***1133**, (31) 1522, **2024**
Freeman, E. G., (4) 80
Freer, P. C., **611**
Freile, W., (129) 699
Freiman, M., (50) 782
Freligh, C. A., (36) 1326
French, H., (64) 87, (29) 324
French, T. R., (72) 1922
Frenzel, A., (106) 1403
Frescoln, L. D., (93) 1667
Freshwater, D., (31) 1838
Freudenthal, G., (83) **1671**
Freudenthal W., (41) 862
Freund, E., (110) 406, (170) 872
Freund, H., (82) 168, (114) 1501
Freund, R., (69, 74, 86) **1586**
Freund, W. A., (125) 1501
Frew, R. S., (37) **402**
Freyer, P. J., (21) **1495**
Friberger, R., (168) 1193
Frick, A., ***1859**
Fried, R., (95) 704
Friedel, G., (50) 1497
Friedenberg, P., (118) 162, (91) 554
Friedenwald, H., (44) 398
Friedenwald, J., **1915**, (15) **1919**
Friedigger, A., (133) 485
Friedjung, J. K., (98) 1195, (123) **1931**
Friedlaender, R., (56) 404
Friedlander, D., (34) 317, (52) 1226
Friedman, H. M., (73) 1742
Friedman, L., (18) 625, (81) 1262
Friedman, S. S., (38) 1931
Friedmann, A. C. H., **68**
Friedmann, M., (49) **2070**
Friedmann, S., (127) 1750
Friedrich, H., (75) **949**
Friedrich, M., **1504**
v. Frisch, B., (133) 1196
Frisch, F., ***1226**
v. Frisch, K., (161) 562
v. Frisch, O., (171) 872
Frising, G., (64) 1402
Fritzsch, E., (97) 704
Froelich, (32) 1191
Froes, J. A. G., (128) 407
Froesch, H., (89) 1841
Fromberg, C., (131) 1750
Froment, J., (74) 558, (46) **701**, (34) 947, (67) 1266, (54) 1746
Fromherz, P., (166) 250
Fromme, A., (62) 166
Fromme, F., (112) **1335**
Fromme, W., (87) 169, (194) 1754
Fronczak, F. E., (63) 553, (3) 1184
Fronstein, R., (126) **1843**
Fronzig, H., (142) **1116**
Fröse, (35) **2069**
Frost, W. H., (38) [illegible] (6) 1184, **1380, 1421**
Frugoni, C., [illegible], (71) 1113
Frühwald, V., (65) ***1986**
Fry, H. D., **1735**
Fuchs, H., (147) 1751
Fuhner, H., (128) 1196, (84) 1233
Fukushi, M., (129) 1270
Fuller, A. L., (10) 555
Fullerton, A., (8) 864
Fullerton, W. D., (86) **783**
Funck-Brentano, L., (102) 90
Fundner, A., (89) 1672
Funk, A., (114) 328, **1561**
Funk, C., (7) 1582
Funke, J., (94) 1667
Fürer, K., (104) 406
Furniss, H. D., ***1534**, (9) 1831, ***1879**
Fürst, V., (137) 1932
Fürstenberg, A., (41) 2070
Fussell, M. H., (16) 396, (54) 1107, (140) 1329

G

Gabastou, J. A., (204) 564
Gabbi, U., (15) 1191
Gaenslen, F. J., (121) 1264
Gaetano, C., (142) 1197
Gaines, L. M., (32) 1492, **1733**
Gaisböck, F., (97) **1334**
Galambos, A., (110) 1116
Galbraith, S. N., (18) 1583
Gale, S. S., (61) 1982
Galippe, V., (33) 947
Gallagher, J., **1248**
Gallavardin, L., (41) 324
Galli, (137) **706**
Galli, P., (78) **1987**
Gallie, W. E., (13) 1101
Galliott, (50) 1195
Gallivan, W. J., (57) 696
Galloway, H. P. H., (132) **820**
Galloway, J., (8) 1582
Gamern, J., (118) 1038
Galup, J., (57) 1746
Gamble, J. A., (36) 695
Gamble, M., (32) **1264**
Gamma, C., (145) 92
Gann, D., ***1273**
Gant, S. G., (118) 321
Gantt, L. R. H., (119) 1329, (75) 1982
Garcia, P. J., (123) 251, (190) 874, (128) 952, (180) 1272
Gardère, C., (71) 1190, (15) 1926
Gardner, H. W., (17) 323, (3) **1581**
Gardner, W. E., (72) **1742**

Garel, (77) 1499
Garin, C., (74) **1499**
Garmagnano, C., (147) 1502, (118) 1843
Garretson, W. V. P., (65) 863
Garrison, F. H., (70) 863, (77) 944
Garrison, P. E., **1823**
Garrod, A. E., (37) **402,** (37) **556**
Garton, W. M., (107) 1397
Garvin, E. C., (20) **941**
Gasbarrini, A., (82) 1987
Gaskill, H. K., ***341,** (51) 1666
Gaspar, A. G., (176) 1676
di Gaspero, H., (117) 483
Gastpar, (129) 1405
Gatch, W. D., ***1273**
Gaté, J., (66) **1266**
Gatewood, L. C., (60) 160
Gauckler, E., (63) **1112**
Gaujoux, E., (36) **1191,** (92) 1500
de Gaulejac, H., (61) 1193
Gauss, K., (93) 793, (132) 1116
Gautier, P., (46) **790**
Gauvain, H. J., (42) 480
Gavieres, J. G., (56) **82**
Gay, F. P., ***1141,** (24) 1578, ***1950**
Gayet, G., (39) 789, (45) **1400**
Gayford, C., (47) 86
Gaylord, H. R., **2022**
v. Gaza, W., (116) 1749
Gazzotti, L. G., (194) 873
Gebb, H., (105) 1930
Gebele, H., (102) **869**
v. Gebhardt, F., (42) **1584**
Geigel, R., (133) 1270
Geipel, P. (169, 172) 488
Geissler, W., (128) **706**
Geist, E. S., (84) 1029
Gelien, J., (29) 1980
Gelinsky, (76) 1987
Gellé, G., **344**
Gellhorn, G., (95) 1262, (97) 1835
Gelma, E., (52) **1034**
Gelpi, M. J., (85) 629
Gemmell, J. E., (11) **946**
Genet, P. A., (72) 558
Gengenbach, F. P., (10) 1394
Geraghty, J. T., ***191, 1561,** (17) **1739**
Gérard, L., (47) 557
Gérard, P. J., (42) 866
Gerber, I., (10) 940
Gergö, E., (108) 1404
Gerhardt, D., (101) 328
Gerstenberg, E., (133) **1337**
Gerster, J. C. A., **615**
essner, H. B., (66) 944
ssner, W., (136) 1406, (84) 1671
esteira, J. M., (197) **873**
Gettkant, R., (96) **633**
Ghedini, G., (144) 632, (162) 1271
Ghilarducci, F., (140) 252
Ghillini, C., (195) 873
Giacchi, G., (152) 1502
Giacquinta, G., (193) 563
Giani, E., (139) 252
Gibbon, J. H., (157) **243**
Gibbons, R. A., (13) **1668**
Gibbs, J. H., (16) 1109
Gibelli, C., (79) 1987
Gibson, A., (18) 699
Gibson, J. L., (10) 1668
Gibson, W. S., (150) 479
v. Gierke, E., (100) 1672
Giese, H., (185) 1676
Giffin, C., (18) 780
Giffin, H. Z., (24) **781**
Gifford, J. P., (97) 1494
Gignoux, (77) 1499
Gil, M., (183) **1272**
Gilbert, A., (57) **247**
Gilbert, M., (33) 700
Gilbride, J. J., (103) **1189**
Gilcreest, J. E., (103) 1108
Giles, A. E., **667, 810**
Gill, J. E., (158) 479
Gillespie, E., (26) 700, (34) 1395, (15) 1744
Gillespie, L. J., (72, 73) 161
Gillett, H. T., (8) 945
Gillette, H. F., (88) 1494
Gillette, L. H., (114) 1263
Gillmore, R. T., ***1944**
Gilman, P. K., (105) 1581
Gilmour, A. J., (100) 242
Ginestous, E., (39) 1034
Gins, H. A., (90) 1268
Ginsberg, S., (81) 1113
Giolito, V., (125) **1589**
Giordano, G., (102) **951,** (146) 1197
Giordano, J., (40) 1497
Giovanni, G., (119) 1589
Giovannini, E., (137) 252
Girault, G. L., (51) 1192
Girode, C., (59) 1111
Girou, E., (44) **246**
Gittings, J. C., (2) 238
Given, C. G., (115) 320
Givens, M. H., (79) 161
Gjestland, G., (132) **1932**
Glaessner, K., (109) 1335, (137) 1406
Glaister, J., (56) 480
Glascock, A., (59) 1188, (25) 1395
Glaser, F., (52) **791**
Glasgow, L. E., (104) 1189
Glass, E., (53) 166
Glass, S. W., (114) 320
Gleason, E. B., (101) 1581
Gleason, J. H., (71) 1742
Gleason, W. S., (90) 1494
Gleitsmann, J. W., (43) 862
Glogau, O., (14) 81, ***123**
Glück, A., (99) 1588
Glynn, E., (22) **1924**
Godbey, M. V., (170) 163
Goddard, H. M., (98) 1581
Godlee, R. J., **121,** (1) 945, (16) 946
Goebel, W., (113) 1037, (72) 1840
Goeffon, R., (53) 867
Goeppert, F., (15) 1664
Goff, A. P., ***2042**
Goiffon, (51) 1497
Goldberg, (56) 1585
Goldberg, B., (84) **1841**
Goldberg, J., (58) 1402
Goldberger, J., (88) **1029,** (146) 1674
Golden, W., (114), 1397
Goldfeld, Z., (178) **562**
Goldman, A., (65) 1922
Goldsmith, P. G., (20) 165
Goldsmith, W. S., (35) 1492
Goldspohn, A., (23) 1185
Goldstein, F., (111) 869
Goldstein, H., (75) 863
Goldstein, H. I., (130) 699
Goldstein, K., (82) 1586
Goldstein, M. A., (68) 477, (110) 1328
Goldstrom, M., (105) 951
Goldthwait, J. E., (17) 475, (1) 859
Goldwater, S. S., (69) 1742
Goltman, M., (91) 945
Golubow, N. T., (155) **1118**
Gomez, V., (109) 794
Gomoiu, V., (43) 1926
Gomolitsky, V., (145) **1116**
Gompertz, L. M., (120) 242
Gonzalez, (117) 794
Good, F. L., (105) **1262**
Good, J. W., (85) 553
Goodale, W. S., (56) **782**
Goodall, H. S., (77) 1262
Goodall, H. W., (48) **1833**
Goodenough, E. W., (22) 1980
Goodenow, N. H., (85) 1580
Goodhart, J. F., (27) **1838,** (18) 1983
Goodhart, S. P., (50) 862, (128) 1328
Gooding, S., (19) 86
Goodman, S. J., (88) 1107, (18) 1324
Goodrich, C. L., (93) 945
Goodridge, F. G., (21) **158**
Göppert, F., (157) **871,** (124) 1931, (24) **2069**
Gordinier, H. C., (11) 624
Gordon, A., (126) 242, ***352,** (87) 864, (51) 944
Gordon, E. S., (142) 322
Gordon, G. S., (23) 1105
Gordon, M. B., (72) 1493, (90) 1922
Gordon, W., (6) 479, (53) 480, (2) **2067**
Gordon, W. S., (110) 1030
Gorgas, W. C., ***953, 1569**
Gorham, W. L., (42) 398
Gorodistsch, S. M., (143) 1674
Gorse, M., (85) **1499**
Gorse, P., (69) **1499**
Gosset, A., (55) 557, (55) 1332, (48) **1401**
Goto, S., (44) **947,** (71) 1333
Gottheil, W. S., (50) 1982
Gottlieb, R., (117) 1501
Gottschalk, S., (85) 868, (112) 869
Götzky, (125) **1931**
Gougerot, H., (83) 89, (99) 90
Gouget, A., (39) **1331**
Gould, A. P., (40) 480, (25) 631, **741**
Gould, G. M., ***1059**
Goullioud, M., (44) 1926
Goullioud, P. E., (46) 403
Gourko, A.; (84, 85) 1987
Gousew, W. J. (35) 866
Gouzien, **274**
Graca, O., (115) 794
Grad, H., (65) 1107
Gradle, H. S., (5) 780, (31) 943, (86) 945, ***2045**
Grady, W. J., **1390**
Graef, W., (74) 1402
Graf, (96) 1841
Grafe, E., (82) 249, (105) 1335
v. Graff, E., (174) 562
Graham, C., (100) 1029
Graham, H. F., ***1537**
Graham, J., (76) 783
Graham, J. M., (28) 402, **2022**
Grancher, H. P., **1090**
Granes, G., (167) 1118
Granger, G. B., (18) 1577
Granger, J., (2) **479**
Grant, L., (29) 1033
Grant, W. W., **1015, *1039, 1318,** (11) **1394**
Grasty, T. S. D., (14) 1831
Graul, G., (36) **2069**
Graves, M. L., (106) **1667**
Graves, W. P., (6) **1324**
Graves, W. W., (100) 1328
Gray, A. L., (117) 1836
Gray, C. H., (23) 1492
Gray, E. A., (21) 2067
Gray, G. A., (68) 783
Gray, H. M. W., (24) 1837, (22) 1983
Gray, J. W., **1486**
Gray, S., (30) 787
Gray, T. N., (82) 319
Grayson, C. P., (68) 628, (30) 861, (102) 1581
Grayson, T. W., (21) 1980
Greco, V., (108) 399
Greeley, H., (84) 477
Greeley, S. A., (21) 239
Green, A. S., ***2043**
Green, B. E. M., (130) 1030
Green, C. C., (74) **783**
Green, C. M., (45) 1028, (41) 1326
Green, E. M., (31) **1492, 1733**
Green, G. R., ***664**
Green, J., (79) 477
Green, L. B., (12) 322
Green, L. D., ***2043**
Green, R. M., (37) 239, (24) 317, (13) 860, (14) **1577,** (28) **1665,** (16) **1919**
Green, S. M., (78) 477
Green-Armytage, V. B., (14, 15) 479
Greenberg, G., (122) 242
Greene, H. C., (15) 860
Greene, H. M., (77) 1493
Greene, J. S., (105) 320
Greenlees, J. R. C., (93) **319**
Greenwald, I., (73) **1028,** (42, 43) 1665
Greenwell, J. S., (58) **477**
Greenwood, A., (13) 1739
Greenwood, M., (23) 556
Greer, C. D., **1732**
Gregersen, J. P., (60) **1035,** (158) 1198, (131) 1844
Gregg, D., (27) 1665
Gregoire, R., (48) 557
Gregor, A., (128) 485
Gregor, G. D., (80) 1494
Gregor, G. S., (139) 162
Gregory, J. H., (23) 239
Gregson, A. H., (6) 699
Greiffenhagen, W., (161) 1752
Greig, E. D. W., (11) 699
Grey, E. G., (11) **1979**
Griffin, D. W., (92) 1108
Griffin, E. A., (67) 1666
Griffin, E. H., (55) 862
Griffin, W. L., (45) 552
Griffin, W. W., (116) 1328
Griffith, A. S., (19) 786
Griffith, E. M., (79) 242
Griffiths, F. G., (6) 629, (7) 1668
Griffitts, T. H. D., (20) 1831
Grigaut, A., (60) 482
Grigsby, G. P., (72) 1189, (52) 1261, (53) 1262
Grimm, R. M., **1089, *1423**
Grimsdale, T. B., (24) 1033
Grindon, J., (99) 1328
Grinker, J., ***1354, 1726**
Grinstead, W. F., (56) 160
Grober, J. A., (158) 562, (115) 705, (95) 1672
Groedal, F., (23) **1664,** (124) 1749
Groedal, F. M., (119) 560, (120) 870, (119) 1196, (79) 1586
Groedal, I. M., (118) 1030
Groedal, T., (119) 560, (124) 1749
Grøn, K., (134) 1932
de Groot, S. B., (56) 166
Grosh, L. C., (78) **864**
Gross, G., (53) **701**
Gross, O., (101) 406
Grosser, P., (109) 635
Groszman, M. P. E., (25) 159
Grotti, A., (7) 1831
Grove, W. E., (33) 1325, (117) 1668
Grover, A. L., ***1297**
Groves, E. W. H., (40) 324, (14) 625
Gruber, G. B., (149) 561
Gruening, E., (20) 81, (36) 1028
Gruhle, H. W., **283**
Grulee, C. G., (1) **1103**
Grumme, (145) 1502
Grünbaum, A. S. F., (16) 699
Grünbaum, H. G., (16) 699
Grünbaum, O., (20) 86
Grunberg, W., (63) **248**
Grund, G., (92) 1403, (94) **1841**
Grune, O., (100) 1114
Grunert, E., (91) 793
Grunert, K. H., (87) 554
Grushlaw, I., (108) 320, (92) 1667
Grussendorf, W. H. T., (106) **406**
Gudzent, F., (63) 1986
Guéniot, P., (51) **403**
Guérin, A., (59) 557
Guerin, C., (34) 1330
Guerrero, M. S., (56) **82**
Guest, L. H., (102) 1923
Guggisberg, (153) **1271**
Guigni, F., (126) 407
Guinon, L., (60) 1266
Guiscz, (81) 1499
Guiteras, G. M., (126) 85
Guleke, (110) 1842
Guljoglou, A., (67) **482**
Gundelach, C. A., (72) 477
Gundermann, W., (93) 559
Gundrum, F. F., (21) 1919
Gunn, J. A., (36) **861**
Gunn, S. M., (13) 1492
Günther, (143) 1406
Gurd, F. B., (41) 1741
Gurney, J. M., (124) 1328
Gutherson, W. F., (71) 319
Guthrie, C. G., (33) 159, ***1822**
Guthrie, J. B., (49) **552,** (123) **1030,** (16) 1837
Guthrie, J. R., (73) 1834
Guthrie, L., (1) 479
Gutman, J., (27) 1027, (53) 1493
Gutmann, J. H., (4) 1258
Guy, W., (8) 164
Guzmann, E., (143) **707**
Gwathmey, L., **237**
Gwerder-Pedoja, J., (113) 90

H

Haagn, T., (62) 166
v. Haberer, H., (83) 482
Hachtel, F. W., (43) 944
Hack, R., (39) 1028
v. Hacker, V., (132) 637
Hackney, E. J., (126) 162
Hadda, S., (66) **1333**
Hadden, D., (28) **317,** (67) 696, ***897**
Hadfield, C. F., (13) 1495
Haenisch, G. F., (102) 1588
Hagedorn, (79) 326, (149) 707
Hagemann, R., (91) **559**
Haggard, W. D., (124) 85, (101) 1029, **1250**
Hahn, H., (97) 406, (106, 116) **1673,** (108) **1930**
Hahn, M., (51) 791
Hailer, E., (121) 91
Hailperin, C. J., (65) 1742
Haim, E., (52) 166
Hainbridge, W. B., (70) 553
Haines, W. D., (97) 242
Haines, W. S., **1901, 1915**
Hajoerle, A., (67) 1193
Hajos, E., (120) 1749
Halben, R., (126) 1196
Hale, W., (30) **695**
Hall, A. J., (18) **479**
Hall, C., (3) 1264
Hall, F. de H., (34) 1265, (23) 1330, (15) 1582
Hall, G., (29) 1109
Hall, G. C., (100) 161
Hall, H. C., (145) **252**
Hall, H. J., (8) 1025
Hall, J. R., (49) 1580
Hall, M. C., (20) 1739
Hall, O. B., (96) 161
Hall, P. M., (22) 239, (12) 1492
Hall, R. B., (11) **396**
Hall, W. S., (24) 1492
Hallé, (63) 1266
Halle, M., (90) 1037
Hallion, (55) **324**
Hallock, W., (64) 628
Halls-Dally, J. F., (34) 1745
Halpenny, J., (45) 160
Halpern, J., (90) **1841**
Halsey, J. T., (114) 400
Halsey, L. M., (131) 699
Halsted, T. H., (135) 162, (88) 399
Halsted, W. S., ***416, *1119**
Hamburger, F., (130) **1196,** (139) **1502**
Hamburger, J., (85) 1987
Hamburger, L. P., (39) 398
Hamill, R. C., (63) 398
Hamilton, A. F., (20) 323
Hamilton, A. M., (60) 863
Hamilton, F. A., ***2030**
Hamilton, W. D., (166) 163, (37) 318, (92) 864, (86) 1107
Hamilton, W. F., (46) 160
Hamlett, B., (91) 1029
Hamm, A., (88) 950
Hamman, L., (60) **696,** (29) 1980
Hammel, S. A., (43) 477
Hammon, J. H., (71) 1327
Hammond, L. J., (23) 1492, (67) 1982
Hammond, R., (4) **1491**
Hammond, R. B., **1916**
Hampeln, P., (62) **1840**
Hand, A., ***990,** (129) 1030
Handley, W. S., (5) **1743**
Handrick, E., (117) 560
Haneborg, A. O., (160) 1198
Hanes, F. M., (165) 872
Hanford, J. M., (22) **1578**
Hann, R. G., (39) **1400**
Hannes, W., (171) 562
Hannum, M. N., (90) 242
v. Hansemann, (167) **1753**
Hansen, G., (20, 21) **1027**
Hansen, P. N., (192) **1754**
Hansen, S., (209) **564**
Hanzlik, P. J., (79) 697, ***957,** (43, 49) **1741**

I

Idzumi, G., (73) 1333
Iglick, S., **1559**
Ikonnikoff, P. S., (75) 2072
Ill, E. A., (66) 1493
Ill, E. J., (14) 694
v. Illyes, (133) 637
Imbert, A., (48) 1034
Imbriaco, P., (102) **793**, (201) 1754
Inclan, A., (201) 564
Ingalls, P. H., (82) 83
Ingals, E. F., (58) 1028
Inge, H. T., **1388**
Inge, J. M., (100) 1108
Ingebrigtsen, R., (37) **626**, (178) **1676**
Ingegnieros, J., (162) 1118
Ingersoll, J. M., (7) 81
Ipsen, A., (158) 92
Iribarne, R., (170) 1676
Isaac, S., (117) 560
Iselin, H., (115) 328, (61) **949**, (81) 1037
Ishioka, S., (66) 1586
Ishiwara, K., (136, 145) 1270
Isobe, K., (132) **1750**
Israel, W., (46) 947, (65) 1333, (150) 1674
Izar, G., (127) 251, (115) 1931

J

Jaboulay, M., (45) 1034
Jack, W. A., (133) 1836
Jackson, A. B., (78) 1922
Jackson, D. D., (58) 83
Jackson, D. E., (65) 1188
Jackson, F. H., **465**
Jackson, J. M., (113) 85
Jackson, J. N., **150**, (11) 1104, *1285 (93) 1396
Jackson, L., (40) **1920**
Jackson, T. S., (60) 83
Jackson, T. T., (95) 1397
Jacob, F. H., (45) 86
Jacob, L., (68) 167, (109) 1501
Jacob, M. M., (101) 629
Jacob, O., (36) **947**
Jacobaeus, H. C., (68) **248**
Jacobi, A., (83) 1494, **1962**
Jacobs, L., (93) 1922
Jacobs, P. P., (76) 242, (61) 1666, (17) 1831
Jacobsohn, A., (101) 635
Jacobsohn, E., (143) **561**
Jacobson, C., (59) **696**
Jacobson, J. H., (8) **1104**, (24) **1185**
Jacobson, N., (79) 1494
Jacobson, C., (118) 870
Jacoby, G. W., (30) 1395
Jacque, J. L., (19) **158**
Jacqueau, (55) **1746**
Jaffé, K., **1976**
Jaffé, R. H., (173) 488
Jaffin, A. B., (81) 319
Jager, F., (122) 1038
v. Jagic, N., (100) 1269
Jagielski, J., (100) 1334
Jagoe, A. J., (121) 1328
Jaklin, (126) **329**
v. Jaksch, R., (126) **91**
James, C. S., (98) 1262
James, W. M., (74) 1262, (35) **1920**
Jamieson, J., (2) 629
Jamison, S. C., (16) 1191
Jancke, (55) 2070
Janet, J., (40) **166**, (66) 558, (44) **1034** (47) 1400, (66) 1671
Janeway, T. C., **1569**, (1) **1738**
Janney, N. W., (40) 1665
Jansen, H., (184) 1676
Jansen, M., (122) 1115
Jaquerod, (41) 166
Jardine, R., (21) **1837**
Jaroschy, W., (100) 1500
Jarzew, A. J., (153) **1117**
Jaubert, L., (49) **1331**
Javal, A., (39) **701**
Jayle, F., (64) 482
Jeannin, C., (89) 89
Jeger, E., (76) 633, (46) 947, (65) 1333
Jehle, L., (138, 139) 1270
Jelliffe, S. E., **1024**, (59) 1262, **1391**, **1575**, **1911**
Jemma, (98) 406
Jenkin, B. A., (21) 941
Jenkins, L. W., (99) 84
Jenkins, T., **1575**
Jenness, B. F., (160) 479, *662, (108) 1397
Jennings, A. H., *271
Jennings, E., (4) **243**
Jennings, J. E., *1620
Jennings, W. B., (49) 782, *1154
Jensen, B., (148) **330**
Jensen, J., (110) **170**
Jeppelli, A., (101) 170
Jepson, S. L., (82) 1743
Jepson, W., (74) 399
Jervey, J. W., (135) 1030
Jespersen, K., (132) **1038**
Jess, A., (31, 32) 397
Jessen, F., (54) 2070
Jex-Blake, A. J., (1, 13) 1108, (8) 1190 (9) **1264**
Jianu, A., (100) 328
Joachim, O., (82) 629
Joachimsthal, (79) 1671
Jobb, E., (70) **1671**
Jobling, J. W., (51) **240**, (45) **1261**
Joest, E., (111) 251
Johannessen, A., (103) **1037**
Johansson, S., (59) **325**, (139) 952
John, M. K., (149) **1751**
Johns, C. O., (28) 626, (95) 1327, (44) 1665
Johnson, A. A., (19) **1259**
Johnson, C. E., (4) 474
Johnson, C. K., (163) 163, (96) 1494
Johnson, E. J., (138) 1030
Johnson, F. P., (5, 6) **474**
Johnson, H. R., (37) 943
Johnson, J. G., (74) 697
Johnson, J. H., (59) 241
Johnson, L. F., (104) 1108
Johnson, T. B., (96) 1327
Johnson, W. N., (57) **552**
Johnston, C. H., (125) 699, (70) 1666
Johnston, J. C., (64) **319**
Johnston, L., (4) **1031**
Johnston, R. H., (85) 399, (41) 943, (42) 944, (108) 1328
Johnston-Lavis, H. J., (8) 1982
Jolly, P., (97) 1269
Jolly, W. J., (67) 1262
Jolowicz, E., (123) 1749
Jona, G., (104) **793**
Jona, J. L., (4) 785
Jonas, S., (64) **325**, (118) **1336**
Jones, A. M., (141) 322
Jones, A. P., (38) **626**, (26) **1578**
Jones, A. T., (19) **695**
Jones, D. W. C., (6) 1982
Jones, E., (31) 1920
Jones, E. G., (149) 1329
Jones, E. M., *1619, *1784
Jones, E. O., (116) 478
Jones, F. S., (55, 56) 1187
Jones, H. A., *9
Jones, H. L., (69) **703**
Jones, H. M., **181**, **414**
Jones, H. W., (60) 1493
Jones, J. J., (39) 240
Jones, K. H., (36) 86
Jones, R., (15) 86, (69) 88, (41) 480, (30) 1400
Jones, S. F., (99) 242, (5) 859
Jones, W., (51) 318
Jones, W. C., (128) 320
de Jong, R. de J., (168) 872
Jopson, J. H., (39) 81, (70) **1982**
Jordan, A. C., (25) 700
Jordan, D. S., **614**, **615**
Jordan, E. O., *410, (36) **1920**
Jordan, H. E., (38) 318
Jordan, J. O., (20) 1492
Jores, L., (110) **1930**
Josefson, A., (105) **635**
Joseph, B., **974**, **1155**, (1) 1324, **1361**, **1889**
Josephson, C. D., (210) 564
Joslin, E. P., (6) **1258**
Jourdan, S., (98) 869
Jubb, A. A., (4) 2067
Juda, A., (115) 1673
Judd, C. C. W., *1947
Judd, E. S., (82) 1396, (98) **1667**
Judson, H. P., **774**, **775**
Juhle, A. J., (177) **1676**
Jukes, A. M., (25) 323
Julliard, (56) 1035
Junca, E., (10) 479
Jundell, I., (132) **1844**
Jungmann, A., (115-128) **91**
Jupille, F., (48) 1670
Jürgens, A., (127) 329
Jutte, M. E., *586

K

Kaefer, N., (104) 1588
Kaempfer, L. G., (130) 242
Kaerger, E., (48) **166**
Kaess, W., (104) 559
Kaestle, K., (108) 1037
Kafemann, R., (132) 870
Kafka, V., (102) 1269
Kahane, H., (138) 1406
Kahane, M., (87) 327
Kahle, P. J., (84) 629
Kahn, A., (56) 1982
Kahn, E., (107) **1037**
Kahn, F., (113) 1196
Kahn, I. S., (110) 1667
Kahn, L. M., (110) 478, *897, **927**
Kahn, M., **237**, (22) **396**, (64) 863, *955
Kahn, M. H., (45) 1579
Kakels, M. S., (83) 83
Kakowski, A., (92) 1587
Kaliski, D. J., (38) 1931
Kall, (123) 1673
Kaminer, G., (170) 872
Kämmerer, H., (91) 1403
Kanavel, A. B., (59) 160, (65) 1028
Kaneko, K., (7) 859
Kannigiesser, F., (84) **1586**
Kantorowicz, (46) 2070
Kaplan, D. M., (51) 1982
Kaplansky, G., (47) 790
Kapp, J. F., (146) 1502
Karas, H., (146) 1116
Karawacki, L., (53) 1332
Karewski, F., (59) 404
Kariya, S., (47) 1111
Karnitzki, A. O., (75) 1113
Karpas, M. J., (14) 551, (67) 1107
Karsner, H. T., (9) **1919**
Kasashima, Y., (69, 70) 1193
Kash, M. C., (51) 1261
Kassabian, N. M., (34) 2067
Kassowitz, K., (156) 486
Kassowitz, M., (58) **791**, (148) 1270, (129) 1337, (116) 1404
Kastle, J. H., (34) **1106**
Kathan, D. R., (86) 1494
Kato, Y., (132) 1270
Katzenstein, M., (61) **1332**, (50) **1926**
Kauert, W., (99) 559
Kauffman, L., *981
Kauffmann, J., (45) **1584**
Kaufman, B., (62) 553
Kaufman, J., (68) 1107
Kaufmann, M., (123) 870
Kaufmann, R., (81) 249
Kaumheimer, L., (106) 1195
Kawasoye, M., (110) 1588
Kebbell, C. V., (22) **700**
Keefe, J. W., (24) **695**
Keelan, R. S., (28) 1669
Keen, W. W., **308**, **927**, *1418
Keene, F. E., (66) 1982
Keeney, B. G., (29) 1920
Kehrer, E., (73, 76) **1747**
Keim, P. S., (169) 163, (111) 1397
Keith, A., (17) 86, (4) 479, (15) 699, (47, 52) 1265
Keith, D. Y., (73) 1189
Kelin, S. R., (120) 1030
Kellersberger, E., (48, 49) 318
Kellert, E., (33) 1981
Kelley, E. R., **1901**
Kelley, L. E., (75) 399
Kelling, G., (122) **636**
Kellner, H. J. W., (80) **1586**
Kellock, T. H., (19) 479
Kelly, H. A., **1015**, (100) 1262, **1574**, (60) 1982
Kelly, J. L., (114) **162**
Kelsey, C. B., (74) 83
Kemp, R. C., **1487**
Kemp, S., (61) **325**, (218) 564, (81) **1747**
Kendall, A. R., (12) **1979**
Kenefick, M. J., (46) **1493**
Keniston, J. M., (3) 1393
Kennedy, A. M., (27) **787**, (22) **1033**, (21) **1837**
Kennedy, F., **1819**
Kennedy, J. C., (74) **1742**
Kennedy, J. W., (70) 1107
Kennedy, R. S., (32) 1669
Kenney, H. T., (84) 1834
Kenny, F. H., (2) 1668
Kenrick, W. H., (30) 631
Keppler, C. R., (63) 1742
Keppler, W., (64) **702**, (103) 705, (105) 1114
Kerl, W., (168) 562, (98) 1588
Kermauner, F., (180) 873
Kerr, A. N., (127) 1264
Kerr, E. K., (68) 1834
Kerr, L., (66) 553, (53) **1395**
Kerr, N., **936**
Kerr, W. M., (126) 401
Kerr, W. W., (50) 1326
Kessler, (107) **1037**
Ketcham, A. H., (109) 161
Keyes, A. B., (89) 697
Keys, E. L., (130) 320, (68) 1742
Keys, F. G., (72, 73) 161
Khan, M. H., (24) 323
Kice, H. W., (67) 319
Kielleuthner, L., (107) 1930
Kienböck, R., (104) 635
Kilbourne, C. H., (15) 1184, **1504**
Kilgore, E. S., *897
Killough, R. S., (160) 785
Kilpatrick, A. J., (69) 1327
Kilpatrick, G. A., (96) 1108
Kilroy, L., (13) **699**
Kimberlin, A. C., (36) 552
Kime, J. W., (40) 1187
Kimura, J., (41) 324
Kinch, C. A., (24) 1980
Kindleberger, C. P., (155) 479
King, A. C., (86) 629
King, A. F. A., (118) 1264
King, H. I., (76) 1327
King, J. M., **1249**
King, W. E., (29) 475, (43) 1106
King, W. F., (35) 552
King, W. H., (91) 1835
King, W. V., *271
Kinghorn, A., (6) 243, (8, 9) 401
Kingsley, A. F., (35) 2067
Kinney, R. H., (107) 629
Kirby, G. H., (54) **782**
Kirby-Smith, J. L., (113) 400
Kirchenberger, A., (105, 106) 483
Kirchenstein, A., (93) 1334
Kirchner, W. C. G., (12) 1324
Kirk, W. R., (119) 1836
Kirmisson, E., (34) 700, (32) 947, (31) 1583
Kirschner, (47) 1839
Kisch, E., (110) 1037, (44) 2070
Kitusi, M., (174) **872**
Klapp, R., (119) **1673**
Klauser, R., (156) **1675**
Klausner, E., (119) 636, (58) 948
Klaveness, E., (41) 477
Klebs, A. C., (21) **860**
von Klein, C. U., (145) 1406
Klein, G., (78) 950, (87) 1841
Klein, S., (142) **1270**
Kleineberger, C., (75) 404
Kleiner, I., *1783
Kleinschmidt, H., (111) 705, (150) 1751
Klemperer, F., (167) **487**
Klemperer, G., (160) 487, (160) **872**
Klieneberger, O., (104) 869
Kligermann, N. R., (172) 562
Kligler, I. J., (44) 1920, (16) 2066
Kling, C., (117) **636**
Klingmüller, V., (87) 704
Klinkert, D., (86) 1929
Klotz, H. G., (50) 1666
Klotz, M., (87) **249**, (96) **250**, (116) **705**
Klotz, O., (151) **243**
Klotz, W. C., (44) 696
Klunker, (50) 2070
Knab, F., **1822**, (18) 1837
Knape, R., (133) 1501
Knapp, A., (24) 397
Knapp, H. B., (123) 699
Knapp, M. I., (92) 399, (55) 552, (71) 863, (98) 1189, (73) 1493
Knapp, P., **1819**
Knight, C. P., *106
Knight, E., (5) 1108
Knoll, W., (118) 560
Knoop, F., (26) 1980
Knopf, S. A., (105) 478, (69) 628, (63) 1107, (16) 1492, (22) 1831, (17) 1980
v. Knorre, G., (117) 1033
Knott, J., (16) 1923
Knower, H. M., (67) 477
Knowles, F. C., (153) 243, (65) **319**
Knowles, M., (13) 1026
Knox, H. A., *105, *657
Knox, J. H. M., (26) 1260
Knox, R. W., (107) 1667
Knudson, L., (79, 80) 1327
Kober, A. M., (94) 1929
Kober, P. A., (58) 318
Koch, C., (158) 1675
Koch, C. A., (119) 484
Koch, F. C., (75) **1028**
Koch, H., (118) **407**, (97) **950**, (170) 1753
Koch, K., (128) 1270
Koch, M. L., (90, 91) 1327
Koch, R., (77) **326**
Koch, W., (91) 1327
Kocher, T., (75) **1036**, (120) 1404, (55) **1985**
Koehmann, M., (120) 91
Koeppe, H., (84) 406, (127) **1931**
Koessler, K. K., (61) **398**
Kofmann, S., (131) 252
Koga, G., (113) **1404**
Köhler, R., (132) 252, (134) 1196
Kohlmann, W., (88) 629
Köhne, W., (50) **948**
Kolb, K., (100) **250**, (95) **869**, (114) **1196**
Kolde, W., (73) 482, (157) 1675, (71) 1747
Kolischer, G., (107) 1262
Kollaritis, J., (64) **2071**
Kolle, W., (60) 1840
Kollert, V., (128) 329
Kollock, C. W., (100) 320
Kondoleon, E., (106) **328**
Kondring, H., (136) 1337
Königer, H., (155) 486
Konkle, W. B., (106) 478
Kopetzky, S. J., (127) 162, (75) 1922
Koplik, H., (6) **238**, (90) 399, *1755
Koppang, N. B., (149) **330**
v. Koranyi, A., (145) **707**
Körte, W., (113) 869, (120) 1401
Kosmak, G. W., (13) 694, (51, 76) 1107, (38, 40) 1326
Kostmayer, H. W., (85) 629
Kotz, R., (132) 485
Kotzenberg, W., (121) **1401**
Koyano, T., (50) 1111
Krabbel, M., (105) **705**
Kraemer, A., (93) 1269
Kramer, B., (41) **626**
Kramer, S. P., *1348
Kranz, P., (101) 559
Kraus, R., (96) 950, (136) 1270
Krause, F., (78) **1113**
Krause, P., (61) **1986**
Krauss, F., (90) 1551

Kreecke, A., (106) **1335**
Kredel, L., (64) 791
Kreibich, K., (83) 1402
Kren, O., (141) 707
Kress, G. H., (61) 696
Kretschmer, H. L., ***114**, (124) **820**, (14) **1395**
Kretschmer, M., (100) 1930
Kreuter, E. W., (63) 702
Kreutzmann, H. J., (22) 1919
Kreuzfuchs, S., (100) 1335, (118) **1404**
Krider, E. E., (142) 243
Krieger, W. A., ***1766**
Kriloff, B., (119) **1843**
Kriwsky, L. A., (144) 1751
Krogh, G. R., (150) 330
Kroh, F., (104) 705, (127) 870
Krohn, G. H. M., (212) **874**
Krokiewicz, A., (131) 1270
Krone, (85) 1841
Krönig, B., (93) 793
Krotoszyner, M., ***188**
Krug, O., (134) **1337**
Krüger, (136) 637
Krulish, E., **1851**
Krumholz, S., (38) **552**
Krumwiede, C., (41) 1106
Kruse, W., (68) **791**
Krusen, W., (4) 1831
Krusius, F., (38) 1028
Kuh, S., **1910**
Kuhn, (130) 1405
Kuhn, F., (106) **951**, (150) 1117, (134) 1501, (77) **1840**, (34) **2069**
Kühn, W., (189) **1754**
Kühnelt, E., (129) 329
Kulenkampff, D., (89) **633**, (52) 1839
Kunst, A. H., (110) 1397
Kunz, H., (150) 708
Kupferle, L., (102) 250
Kürt, L., (123) **636**
Kuru, H., (175) 488
Kuschel, J., (10, 11) 1739
Kusel, G. C., (40) 696
Küster, H., (145) 870
v. Kutscha, E., (58) **2071**
Kutscher, K., (51) 1585
Kutschera, A., (124) 1116, (147) 1270
Küttner, H., (100) 559, (92) **869**, (83) **1268**
Kuznick, P., (60) **1927**
Kyle, W. S., (86) 161

L

Laache, S., (183) **1753**
Labbé, D., (54) **1332**
Labbé, H., (95) 90
Labbé, M., (47) 403, (40) 631, (52) **867** (56) 1402
Laborderie, A. B., (82) **868**
Lackenbach, F. L., (43) 160
Lacouture, B., (87) 1499
Ladd, M., (43) 81, (1) **1576**
Ladd, W. E., (28) 551, (45) 1326
Lade, F., (114) 1335, (101) 1672
La Fetra, L. E., (3) 238
Laffer, W. B., (36) 1832
Lafforgue, M., (66) **1746**
Lafont, A., (40) 246
LaForce, B. D., (78) 1834
La Forge, F. B., (60) 318
Lagane, L., (48) 403, (62) 1746
Lagarde, M., (54) 1111
Lake, R., (20) **244**
Lalor, N. P. O., (17) 1033
Lamb, A. R., (17) 1239
Lamb, D. S., (120) 1264, (131) 1836
Lamb, F. W., (135) 243
Lambert, A., (34) **245**, **1483**, ***1933**
Lambert, R. A., (165) 872, (20) **1578**, **1661**
Lameris, H. J., (63) 166, (85) **168**
La Mothe, E. A., (73) 1396
Lamothe, F. E., (50) 552
Lampé, A. E., (19) 1324
Lamy, L., (49) 247, (28) 1191
Lancaster, W. B., (5) 1393
Lance, (64) 1498
Lancereaux, E., (20) 2069
Landau, M., (62) 949, (90) 1403
Lande, P., (38) 1984
Landenberger, J. C., (82) 1262
Landis, H. R. M., **1571**, (94) **1581**
Landivar, R., (90) 1988
Landrieu, M., (84) 1580
Landrum, W. W., (96) 1029
Lane, C., (21) 1669
Lane, C. W., **1812**
Lane, L. A., (65) 160
Lane, W. A., (27) **244**, (63, 65) 477, (16) 865, (7) 1190
Lang, B. T., (5) **945**
Lang, J., (94) 1114
v. Lang, K., (78) 1927
Lang, W., (196) **1754**, (19) 1983
Langbein, R., (133) **560**, (163) 562
Langdon, F. W., (95) 242
Lange, E., (99) 705
Langer, E., (141) 1270
Langes, E., (188) 563, (114) 1588
Langmead, F., (24) 865, (20) **1983**
Langridge, F. W., (20) 630, (3) 1923
Langstein, L., (116) 251, (156) 486, (103) 1930, (66, 67) 2071
Langwill, J., (11) **1190**
Langworthy, H. G., (100) 698
Lanza, R., (141) **330**
Lapage, C. P., (16) **401**, (17) 1583
Lapeyre, L. N., (41) **1331**
Lapham, M. E., (64) 1107, **1570**
Lapointe, A., (98) **90**
Lapointe, G. R., (58) 1671
Laquer, F., (97) **1749**
Larkin, J. H., **1891**
Larsen, C. L., (61) 160
LaSalle, J. J., (90) 1108
Laslett, E. E., (34) **556**
Lassen, O., (146) **252**
Lasserre, P., (36) **1984**
Lastaria, F., (111) 951
Latham, A., (25) 480
Lathrop, W., (85) 1494
Lattes, L., (161) 872
Lattimore, R., (23) 475
Lattin, C. B., (65) 553
Laubenheimer, K., (178) 873, (114) **1196**
Lauber, H., (117) 1931
Lauenstein, C., (102, 103) 1114
Laurent, F. V., (67) **628**
Laurent, O., (60) 1111
Lauritzen, M., (130) **872**
Lavaille, (59) 1266, (35) **1026**
La Vake, R. T., (42) 477
Lavandera, M., (101) 1189
Lavialle, (60) **1198**
Lavinder, C. H., ***42**
Law, A. A., **314**
Lawatschek, R., (120) 636
Lawrence, M. C. S., (15) 1111
Lawrow, W., (69) 1402
Laws, J. W., (116) 320
Laws, W. V., (40) 240
Lawson, D., (26) **480**
Lazzari, E., (131) 1992
Leach, P., (151) 479
Leale, M., ***1523**
Leary, T., (55) 696
Leary, T. J., ***1293**
Leathers, W. S., **1186**
Leavitt, F. E., ***4**
Lebedev, D., (89) 482
Lebon, H., (68) 1671
Le Breton, P., (8) 859, ***981**
Lecène, P., (40) 1034
Le Dentu, (32) **165**
Lederele, E. J., (73) 83
Lederer, M., ***811**
Lederer, R., (131) **1196**, (126) 1337, (120) **1931**
Lederman, I., (32) 781
Ledingham, J. C. G., (10) 1582, (37) 1669
Leduc, S., (131) **1038**
Lee, R. I., (16) **475**, (8) 1276
Leede, W. H., (186) 1753
Leeds, A. B., (81) 1589
Leen, T. F., (18) 1492
LeFevre, E., **931**
Lefèvre, H., (55) **1266**, (48) **1331**
Lefevre, W. I., (126) 243
Leffmann, H., **387**
Legg, A. T., (5) **1491**
Legge, R. T., (57) 1028
Leguen, F., (33) 166, (38) **701**, (42) **1400**
Lehle, (155) 1752
Lehmann, F., (143) **637**
Lehmann, K. B., (115) 1038
Leibich, E., (159) 1675
Leichtweiss, F., (77) 1267
Leidy, J., **1174**
Leighton, A. P., ***279**
Leiper, R. T., (29) 556
Leitao, M., (35) 1034, (3) 1576
Lejars, F., (66) **248**, (40) **947**, (64) 1193
Leland, J. T., (26) **781**
Le Lorier, V., (87) 89, (66) **1112**, (41) 1926
Lemaire, H., (45) 324
Lemann, I. I., (113) **162**
Leme, B. P., (199) 563, (106) 791, (127) 1589
Lemeland, J., (55) 1111, (43) **1331**
Lemoine, G. H., (60) 1193, (69) 1671
Lengemann, P., (130) 252
Lenk, R., (83) 704, (53) 2070
Lennart-Norrlin, (45) 246
Lenoble, E., (43) **1746**
Lensman, A. P., (106) 1835
Lenz, J., (88) 868
Lenzmann, R., (118) 1673
Leo, H., (122) 1501, (98) **1672**
Leonard, V. N., (17) **1185**, (84) **1396**
Leopold, J. S., (8) 238
Leopold, S., (54) 1107, (140) 1329
Leotta, N., (153) 1502
Lepage, G., (36) **245**
Lépine, R., (85) **1333**
Lerch, O., (124) 569
Lerche, W., ***1210**
Lerda, G., (104) 1114
Lereboullet, P., (37) 1191
Leriche, R., (58) **166**, (58) **325**, (99) **1114**, (57) **1192**, (79, 80) 1840
Leroux, C., (63) **218**
Lerskov, A. N., (94) 1108
Lesage, A., (51) 1192, (45) 557
Leslie, R. M., (39) 324, (23) 630
Lesné, E., (64) 867, (33) 1031, (38) 1191
L'Esperance, E. S., (21) **396**
Lespinasse, V. D., (53) 398
Lesser, E. J., (106) 1037
Leszynsky, W. M., (119) 1328, **1391**
Letulle, M., (85) 89, (63) 632, (75) **867**, (50) **1401**
Leubuscher, P., (86) **1268**
Leuenberger, S. G., (65) **682**
Leuret, E., (43) **1497**, (47) 1746
Levene, P. A., (54, 60) 318, (80) 1028, (101) 1037, (89) 1327, (19) 2066
Lévi-Frankel, G., (99) 90
Levin, E., (70) 404, (62) 1586
Levings, A. H., (135) 85
Levis, H. J., ***1359**
Levison, C. G., (35) 317, (62) 696, ***721**, (19) **1919**
Levison, L. A., (85) **1107**
Lévy, F., (51) 324, (73) 401, (50) 1034
Levy, J., **1169**, **1850**
Levy, R., (121) 184, (146) **707**, ***1518**
Levy, W., (190) 1754
Levyn, L., (97) 1667
LeWald, L. T., (10) **317**
Lewi, W. G., (1) **694**
Lewin, A., (153) **1674**
Lewin, C., (66) 1025, (80) 1402
Lewin, L., (73) **919**, (90) 1195
Lewinski, J., (89) **1267**
Lewinski-Corwin, E. H., (116) 698, ***1787**
Lewis, B., ***1765**, **2060**
Lewis, C. F., (40) 177
Lewis, E. R., (93) 698
Lewis, F. P., (126) 478
Lewis, H. B., (88) 1327
Lewis, H. F., (59) 398
Lewis, J. D., (111) 161
Lewis, P. A., ***202**, (28) 1395, (23) 1578
Lewis, R., (76) 943
Lewis, R. M., (100) 1262
Lewis, T., (10) **243**, (35) **556**, **665**, (9) 1108, (3) **1738**
Lewisohn, R., (7) 316
Lewy, A., (106) 1328
Lewy, J., (105) 1403
Leys, J. F., (120) 401, (99) 1397
Lian, C., (53) **324**, (78) **867**
Libby, G. F., (88) 554
Liceaga, E., (13) 1184
Lichtenstein, F., (70) **482**, (141) 92
Lichtwitz, L., (48) 1985
Lichty, D., (21) 1395
Licini, C., (97) 869
Lidbetter, E. J., (1) **1581**
Liébault, G., (49) 557, (37) **700**
Lieber, M., (87) **483**
Liefmann, E., (92) 1195
Lieske, H., (123) 484
Lieven, F., (139) 1197
Likes, S. H., ***1359**, ***1940**
Lillingston, C., (21) **244**, (35) 489
Lind, S. C., (16) **941**, ***1412**
Lindemann, A., (124) 870
Lindemann, W., (142) 870
Lindgren, E., (123) 1038
Lindig, P., (87) **950**, (74) 1586
Lindner, H., (91) 869
Lindsay, J., (31) 402, (16) 1330
Lindsay, J. A., (17) 1495
Lindsay, J. J., (90) 945
Lindsay, W., (162) 163
Lindsey, M. K., (106) 698
Lindström, E., (118) **1931**
v. Lingen, L., (53) **404**, (139) 707
Linn, G. W., **1902**
Linnell, B. M., (97) 478
Linthicum, G. M., (101) **320**
Lintz, W., ***649**, (21) 1578
Linville, A. Y., (127) 1836
Linzenmeier, (95) 559
Lipowetzky, L., (90) 1402
Lippens, A., (79) 558
Lippincott, A. H., (70) 319
Lippmann, A., (141) 1502, (63) **1586**, (115) 1589
Lipsitz, S. T., (91) **161**
Lisbonne, M., (44) 1746
Lissauer, M., (132) 560
Lisser, H., (34) **159**
Lister, T. D., (58) 480
Litchfield, L., (131) 401, ***1691**
Litchfield, W. F., (12) 1668
Litterer, W., (115) 400, **1249**
Little, A. D., (57) 1834
Little, E. M., (17) 1264
Little, H. C., ***899**
Little, O. W., **1388**
Little, W. G., (76) 1580
Litzenberg, J. C., (5) 80
Li Virghi, G., (63) 558
Lloyd, L., (9) 401
Lobenhoffer, W., (48) 1839
Lobenstine, R. W., (13) 1324
Lobsenz, J. M., (63) 1922
Lockhart, B. W., (69) 83
Lockwood, C. B., **367**, **1876**
Lockwood, T. F., (51) 1580
Loeb, C., (77) 477
Loeb, J., (41) 1665
Loeb, L., ***1857**, **2022**
Loeb, S., (93) **633**
Loeper, M., (13) **1191**
Loevy, A., (59) **1839**
Loewenthal, W., (106) 869
Loewi, O., (70) 1586
Löhe, H., (28) 2069
Lohse, J. L., (53) 1028
Loiseau, G., (23) 1925
Lommel, F., (125) 560
Lommen, C. P., (85) 1029
London, E. S., (75) 168
London, J., (86) 83
Long, D., (137) 699
Long, E. R., **2021**
Long, J. W., **237**
Longard, C., (53) 1926
Longcope, W. T., (18) **396**, (70) 1742
Longfellow, R. C., (33) 695
Longino, J. T., (80) 628
Looney, R. N., (26) **1740**
Lopes, U., (42) 557
v. Lorentz, (69) 1986
Lorenzini, A., (126) 952
Lossen, (95) **1269**
Lotheissen, G., (85, 86) **483**
Lothrop, H. A., (25) 317, (23) 625, (43) 1326, (6) **1393**
Lotsch, F., (124) 1501
Lott, H. S., (7) **158**, (13) 1831
Loughran, R. L., (124) 162
Love, A. G., (90) 1189, (58) 1493
Love, J. K., (15) 786, (13) 1190
Lovell, A. G., (32) 244
Lovett, R. W., (13) 475
Low, G. C., (28) 165, (23) 787, (34) 1669
Lowenburg, H., (152) **243**
Löwenfeld, W., (173) 488
Löwenstein, A., (98) 1334
Löwenstein, E., (88) 1268
Löwenstein, S., (94) 1748
Lower, W. E., (11) 475, (46) 1741
Lowsley, O. S., ***110**
Löwy, J., (106) 1749
Lübke, (49) 1585
Lublinski, W., (70) 326
Lubman, M., (102) 1189
Lucas, H., (96) 704, (70) 1333
Lucas, R. C., (22) 244
Lucas, W. P., ***1611**
Lucas, W. S., (23) 158
Lucatello, L., (116) 1589
Luce, G., (100) 559
Lucibelli, G., (100) **170**
Luckett, W. H., (16) 316, **1024**
Lüders, C., (68) **404**, (66) **791**
Lüdke, H., (86) 249, (87) **1402**
Ludloff, K., (10) 859
Luff, A. P., (2) 1494, (43) 1670
Luger, A., (101) 959, (134) 1196
Luithlen, F., (104) **1842**
Luke, H. C., (90) 783
Lukens, C. J., (130) 478
Luker, S. G., (26) 1837
Lumpe, R., (134) 330
Lund, A., (123) **1843**
Lund, F. B., (31) **239**
Lundgren, M., (145) **1338**
Lundsgaard, C., (109) 251
Lundsgaard, K. K. K., (160) **92**
Lurie, W. A., ***2045**
Lusk, G., (52) **318**
Lusk, W. C., (15) **316**
Lusk, W. T., (32) 239
Lust, F., (94) 250, (96, 97) 406, (155) 562, (115) 1404, (106) **1673**
Lüthje, H., (161) **487**, (100) **1841**
Lutz, R., (142) 92, (152) **708**, (193) 873
Luz, F., (209) 1754
Lyall, H. W., (54) **1187**, (37) **1981**
Lyle, H. H. M., (160) 162, (5) **1738**
Lyman, C. B., (19) 475
Lyman, H., (80) 161
Lynah, H. L., (22) 81, (46) 1833
Lynch, J. [illegible], (71) **628**
Lynch, K. [illegible] (51) 1922
Lyon, E. P., ***1019**, (69) 1834
Lyons, R., ***1216**
Lyons, W. C., (16) **86**

M

Maass, H., (105) 1672
Mabille, H., (64) **1746**
McAbee, W. D., (14) 1184, ***1950**
Macalister, C. J., (11) 1329
Macallum, A. B., (78) **161**
McArthur, L. L., **238**
McBride, J. H., (7) 780
McBride, P., (14) 1109, (23) 1399
McCabe, W. M., **1248**
MacCallum, W. G., (123) 1125
McCampbell, E. F., **1357**
McCann, F. J., (39) 1110

McCare, T., **474**
McCarrison, R., (21) 556, (26) **631**, (25) **787**
McCarthy, H. L., (43) 1111
MacCarty, W. C., (87) 1396
McCaskey, G. W., (93) 399
McCaughey, R. S., (112) **242**
McCaw, J. F., (132) 162
McClellan, T. C., **1388**
McClenahan, H. C., (46) 1326
McClintock, J. T., (35) 1187
MacConkey, A. T., (27) **1744**
McConnell, A. A., (4) **163**, (25) 1496
McConnell, A. B., (7) 1324
McConnell, G., (52) 1187, (126) 1328
McCool, J. L., (66) 1396
McCord, C. P., (50) 944, (89) 1396
McCoy, G. W., **1503**
McCrudden, F. H., (47, 48) **240**, (52) 318, (39, 40) 626, (112) **1501**
McCullough, P. B., (41) 696
McCurdy, S. L., (93) 783
McCurry, W. T., (29) 1260
McDaniel, A. C., (99) 1108
McDill, J. R., ***1847**
McDonagh, J. E. R., (71) 88, (16) 630
McDonald, E., ***1766**
MacDonald, J. B., (78) 399
McDonald, P. Z., (65) 1834
MacDonald, S. G., (19) 323
McDougall, W. T., (58) 241
McDuffie, M. W., (119) 1030
McFarlan, D., (39) 943
McFarland, J., **473**, (51, 52) **1187**
McFarland, R. L., (93) 1029
Macfarlane, W. D., (16) 556
Macfie, J. W. S., (1) 1397
McGaffin, C. G., (17) 551
McGavin, L., (20) 479, (2) **1836**
McGee, J. C., (82) 1189
McGlannan, A., **71**, (78) 553, ***733**, (92) 1396
McGowan, J. P., (10) 1190
McGrath, B. F., **364**
McGraw, T. A., (74) 1666
McGuigan, H., (64) 1188
McGuire, E. R., (121) **162**, (125) **820**
McGuire, R. C., (22) 401
McGuire, S., (114) **85**, (80) 553
Mache, H., (141) 1502
Macht, D. I., (34) 1665
Maciel, J., (195) **563**
McIntosh, J., (17) **946**
McIntosh, W. P., (58) 944
Mack, M. H., (16) 1395
Mackay, D. M., (33) 1838
Mackay, G., (4) 945
McKay, H. S., (90) **161**
McKee, C. S., (18) 1668
MacKee, G. M., (92) 1189
McKelway, G. I., (80) 697
McKenna, C. H., (103) **1262**
McKenty, J., (37) 1741
McKenzie, B. E., (44) 160
McKenzie, D., (9) 479, (19) 865, (15) 1109
Mackenzie, J., (9) 243, **665**
McKenzie, R. T., (14) 239
McKeon, F. H., ***183**
McKillop, L. M., (6) 85
McKinley, F. J., **1318**
MacKinnon, A., (29) 1492
Mackintosh, A. H. G., (24) 244
McKisack, H. L., (2) **699**
MacLaren, A., (55) **1666**
McLaughlin, A. J., (46) **81**, (16) 244, (31) 695. (66) 863
MacLaurin, C., (5) 85, (9) 1031
Maclay, J. A., (65) 1493
McLean, E. R., (112) 320
McLean, F. C., ***588**
McLellan, S. W., (5) 401
MacLennan, A., (33) 402
Macleod, J. M. H., (73) 88
McMahon, J. P., (137) 85
McManus, T. U., (36) 1187
McMichael, J. R., (68) 1327
McMillan, A. H., (43) 1395
McMorrow, F., ***966**
MacMurchy, H., (73) 697
McMurray, W., (4) **1031**
McMurtrie, D. C., (92) 161, (38) 239, (60) 477, (112) 478, (94) 629, (117) 1263, (101) 1835, (61) 1922
McMurtry, C. W., (53) 1666
Macnab, A., (39) **1265**
Macnaughton-Jonas, H., (1) 163, (27) 1033, (25) 1330
McNeil, C., (10) 1190
McPeek, C., ***1777**
McPherson, F., (47) 398
McPherson, R., (77) 1107
Macquillan, J. W., (88) 242
Macrae, D., (33) 1187
McReynolds, J. O., (96) 1397
McVea, C., **1487**
McWalter, J. C., (49) 631
McWilliams, C. A., ***730**
Macy, M. S., (95) 399, (57) 1395
Maddox, R. D., ***663**
Madsen, E., (139) 1590
Maechtle, E. W. ***1878**
Magaldi, J., (133) **407**
Magee, R. S., (57) 241
Magitot, A., (84) 1580
Magni, E., (154) 1502
Magnus, G., (51) 166, (89) 406, (127) **1116** (54) **1585**
Magnussen, G., (59) 702
Magoon, C. A., (34) 695
Magruder, A. C., (27) 1105
Magruder, M. J., (58) 1580
Mahé, G., (59) 1746
Mahler, L., (135) **408**
Mahu, G., (76) 558
Maier, L., (126) **1405**
Mailhouse, M., (51) 1921
Maillet, F., (51) 247, (29) 1191, (57) 1498
Maingot, (52) 247
Maiolo, B., (118) **951**
Mair, W., (17) 1583
Major, R. H., (27) 1980
Makuen, G. H., (35) 943
Malan, A., (161) **1271**
Malan, G., (138) **330**
Malcolm, J. D., (4) 555
Malhéné, (61) **867**
Malins, E., (26) 323
Maliwa, E., (90) 704, (114) 1115
Mall, F. P., ***1599**, **1655**
Mallett, E. P., ***1226**
Mallory, F. B., (49) **1187**
Malone, W. H., (36) 1492
Maloney, W. J. W. A., (77) 1922
Mancioli, T., (146) 92
Mandoul, A., (71) **1671**
Manges, M., (97) 629, ***661**, **1680**
Mangold, E., (51) 2070
Manicatide, M., (68) 2071
Mann, A. T., **308**
Mann, F. C., ***1273**
Mann, F. H., (75) 242
Mann, R., **1248**
Mann, R. H. T., (9) 1577, (35) 1579
Mann, T. A., (66) 1327, (48) 1920
Mann, W. L., (130) 401, (100) 1397
Mannaberg, J., (113) **1931**
Mannheimer, G., (45) 1982
Manning, J. V., (61) 1922
Manoiloff, E., (56) 948
Manouelian, Y., (40) 866, (25) **946**
Manoukhine, I. I., (35) 789, (45) 1985
Manquat, **383**
Mantelli, C., (110) 951, (129) 1932
Mantle, A., (35) 1745
Manwaring, J. G. R., ***278**
Manwaring, W. H., (45) **240**, (417) **1260**
Marc, W., (147) 870
March, C. J., (43) 240
Marchais, P., (9) **474**
Marchand, F., (114) 1501, (105) 1749
Marcialis, M., (118) **1589**
Marcille, M., (6) 1923
Marcora, F., (80) **1987**
Marcorel, E., (78) **867**
Marcus, K., (140) 952
Marcy, A., (137) 401
Marcy, H. O., (92) 1581
Marek, R., (146) 1270
Maresch, R., (82) 792
Margarot, J., (44) 1746
Marie, A., (26) **1926**
Marie, P., (46) **247**, (90) 558, (60) **1332**
Marie, R., (31) 1926
Marinacci, S., (148) 92
Marine, D., (44) 627, (77) 697, (19) **1259**, (39) 1260, (32) 1665
Marinelli, F., (157) 708
Marinesco, G., (90) 89, (31) 947, (28) 1583
Marion, G., (39) 166, (43) 701, (43, 46) 1400, (61, 67) 1671
Mark, E. G., ***514**
Markley, P. H., (76) 863
Marks, A., (8) 322
Marks, W. L., (2) **1979**
Markus, N., (56) **1839**
Marman, N. B., (12) 1982
Marques, L. P., (135) 952
Marsh, J. P., (84) 1494
Marshall, C. R., (95) 319
Marshall, E. K., (92) **1327**
Marshall, G. B., (28) 1745
Marshall, G. M., ***179**
Marshall, H. W., (8) 940, (49) 1028, (20) 1105
Marshall, V. F., (108) 629
Martelli, C. D., (152) 92
Martin, A., (85) 950
Martin, C., (27) 1264
Martin, C. J., (18) 401, (34) 402, (5, 17) 479
Martin, E., (141) 1329
Martin, E. D., (53) 552, (125) **1836**
Martin, E. H., (117) 1030
Martin, F., (152) 1329
Martin, H. H., (115) **85**, (112) 400
Martin, P. F., (41) 1492
Martinet, A., (60) **247**, (49) 403, (60) 558, (52) 701, (52) **1401**, (83) 1499, (61) **1746**
Martini, E., (38) **947**
Martius, (151) 1674
Marvel, W. J., (101) 1262
Marvin, D., (94) 945, (40) 1832, (115) 1923
Marx, H., (112) 559, (140) 1750
Marzo, A. L., (160) 1502
Mas, F., (169) **1675**
Maslow, M. S., (163) **1752**
Mason, A. B., (145) 243
Mason, E. M., (135) 321
Mason, J. M., (122) 85, (135) 321, **1389**
Massarotti, V., (83) **2072**
Massey, G. B., (76) 1493
Masson, P., (55) 1332
Masten, H. B., (81) 242
Mathes, P., (112) 328
Mathies, A., (143) 1116
Mathieu, A., (52) 1497
Matignon, J. J., (40) 557
Matout, M., (134) 407
Matson, H. S., (23) 1669
Matson, R. W., (108) 1835
Mattauschek, E., (61) 1586
Matthews, A. A., (83) 1262
Matthews, A. C., (29) 317
Matthey, A. C., (73) 1671
Matthey, A. L., (98) 1500
Mattisson, K., (63) **1085**, (143) **1338**, (85) 1747
Matzenauer, R., (119) **1336**
Mauclaire. P., (47) 557, (47) 866, (41) 1497
Maudsley, H., (164) 1118
Mauldin, L. O., (99) 320
Mauriac, P., (52) 1192, (39) **1838**
Maus, L. M., (42) **862**
Mauté, A., (94) **90**
Maverick, A., (74) 944, (63, 71) 1262, (92) 1835
Maxwell, W. H., (16) 1982
May, C. H., (26) 1496
May, E. S., ***1680**
Maybaumm, J., (82) **1747**
Mayberry, S. N., (87) 319
Maybury, B. C., (11) **2068**
Mayer, A., (93) 950, (151) **1117**, (68) 1193, (139) 1406
Mayer, E., (83) 1841
Mayer, L., (9) **859**
Mayer, M., (122) 1404, (76) 1586
Mayer, T. F. G., (3) **1397**
Mayes, C. M., (66) 1262, (68) 1922
Mayesima, J., (76) 1840
Mayhew, D. P., (50) 1833
Maynard, E. F., (7) 479
Mayo, C. H., **237**, (82) 697, (83) 1029, (25) **1324**, **2065**
Mayo, H., (10) 86
Mayo, W. J., ***512**, (1) 624, **884**, (89) **1262**, (30) **1832**
Mayrhofer, E., (119) **91**
Mays, T. J., (84) 1189, **1811**
Mazel, P., (41) 557, (84) 558, (71) 867, (41) 1191
Mazet, (46) **701**
Mazzitelli, P., (117) 951
Mazzolani, D. A., (207) 1754, (116) 1843
Mead, F. H., (115) **698**
Meader, F. M., (3) **624**
Means, C. S., (72) 1396
Means, H. J., (83) 864
Means, J. W., (56) 1922
Means, W. J., **933**
Medalia, L. S., (51) 82, (149, 150) **162**, (33) 239
Meder, E., (83) 633
Medigreceanu, F., (43) **866**, (24) 946, (24) 1925
Meding, C. B., (13) 1664
Meek, W. J., (21) 1739
Meek, W. O., (40) **402**
Mees, R., (65) **1193**
Meilo-Leitao, (2) 864
Meinertz, J., (79) 249
Meira, R., (129) 407
Meisenbach, R. O., **1817**
Melcher, W. P., (64) 1493
Melchior, E., (93) **704**
Melchior, L., (165) 1198, (75) **1267**, (44) 1584
Melikianz, (87) **1987**
Meltzer, S. J., (29) **941**, **1182**, (42) **1261**, ***1407**
Menacho, M., (168) 1675
Mendelssohn, A., (117) 251
Mennell, J. B., (19) 699
Mensi, E., (187) 488
Menville, L. J., (52) 552
Menzies, P. K., (51) 398
Mercer, R. E., (43) 552
Mercier, C., (32) 86
Merckens, A., (109) 1930
Mercklin, A., (82) **327**
Meredith, E. W., (88) **864**
Merrem, C. B., (99) 1672
Méry, H., (54) **631**, (61) **867**, (64) 1266, (41) 1400
Messerschmidt, T., (63) **404**
Metchnikoff, E., (37) **246**
Metz, R. B., (78) 697
Meyer, A., (67) 399, (12) **551**, (2) 1663
Meyer, A. W., (60) 166, (50, 51) 1839
Meyer, C., (109) 705
Meyer, E., (103) 406, (112) 705, (108) **1269**
Meyer, F., (27) **2069**
Meyer, G. M., (80) 1028
Meyer, K. F., (39) 1106
Meyer, L. F., (55) **1839**, (69) **2071**
Meyer, O., (96) 1114, (136) **1116**, (86) **1333**
Meyer, R., (108) 251, (58) 404, (72) 482, (138) 637
Meyer, W., (142) 162, (43) **947**, (119) 1038, (60) 1742, **1912**, **2024**
Meyer, W. R., (118) 1270
Meyer-Betz, F., (103) 328
Meyer-Rüegg, H., (76) **1036**
Meyers, A. E., (9) **1979**
Meyers, J., **1575**
Michelson, N., (128) 1843
Michiels, J., (115) 251, (122) 407
Michiels, M., (117) 407
Michl, V., **519**
Michon, E., (36) 166
Middleton, A. B., (53) 160
Middleton, W. D., (72) 1834
Midoŕikawa, H., (50) 1111
Miescher, F., (56) 1985
Mikell, O. V., (89) 945
Milani, E., (140) 252
Miles, W. E., (14) 630
Miller, A. M., (52) 160, (85) 1396
Miller, C. J., (89) 629
Miller, E. H., (35) 781
Miller, F. E., (66) 628
Miller, G. B., (12) 694
Miller, H. C., (74) **88**
Miller, H. W., (77) 399, (13) 551
Miller, J. R., (102) **1262**
Miller, J. W., (47) 1985
Miller, M. B., (60) 1262, (102) 1397
Miller, R., (3) 1189
Miller, S. R., (92) 945
Millet, J. A. P., (29) 1665
Millette, J. W., (71) 1396
Milligan, W., (48) 480, (27) 631
Mills, C. K., (141) 1329, **1910**
Mills, H. P., ***889**
Mills, W. S., (102) 399, (3) 1918
Millspaugh, W. P., (68) 696
Milne, L. S., (4) 624, (86) 704, ***822**, (80) 1189, (95) **1667**, (62) 1922
Minchin, W. C., (45) 1265
Minea, J., (90) 89, (31) 947, (28) 1583
Minett, E. P., (31) 165
Miningham, W. D., (86) 1922
Mintz, W., (109) 1842
de Miranda, P., (147) 638
Mitchell, A. P., (14) 786
Mitchell, J. E., (3) 1836
Mitchell, O. W. H., (8) 1738
Mitchell, S., (100) 1923
Mittendorf, W. K., (48) 944
Mittwoch, E., (82) 1267
Mitzmain, M. B., (112) 1836
Miyakawa, Y., (48) 1111
Miyake, H., (51) **1926**
Miyauchi, K., (67) 1333
M'Kinniss, C. R., (55) 1493
Mocquot, P., (34) **1583**
Moffit, H. C., (18) 1919
Mogi, T., (50) 1111
Mohr, C. A., **1389**
Mohr, R., (121) **1115**
Moïssidès, M., (186) 488
Moleen, G. A., (28) 1105
Molineus, G., (94) 559, (100) 705, (106) 1114, (131) 1501
Moll, A. M., (60) 1188
Moll, L., (119) 1931
Molla, D. R., (161) 1502
Møller, P., (131) **1589**, (94) 1988
Möllers, B., (88) 704, (123) 1501
Molloy, D. M., (117) 85
Molodenkoff, A., (79) 482
Molyneux, S. D., (68) 1982
Momburg, F., (122) 870, (104) **1403**
Moncrieff, R. S., (9) 161
Mondor, H., (61) 482
Mongour, C., (57) 1671
Monod, O., (67) 1266, (54, 65) 1746
Monod, R., (81) 558
Monprofit, (58) 1266
Monro, T. K., (20) 1495
Montefusco, A., (163) 1271
Montgomery, C. M., ***494**, **1318**, (23) 1578
Montgomery, D. M., (78) 1580
Montgomery, D. W., ***7**, (102) **698**, (47) 1187, ***1692**, (20) 1919, ***2035**
Montgomery, E. E., (122) 320
Mood, G. M., (77) 1982
Mook, W. H., (71) 160
Moolgavkar, S. R., (5) **243**
Moon, R. O., (14) 1264
Moon, V. H., ***1764**
Moore, A. R., ***345**
Moore, B., (63) 1188
Moore, C. L., (112) 1397
Moore, H. A., (28) 1920

Moore, J., (54) 480
Moore, J. W., (43) **626**, (61) **1188**
Moore, R. W., (99) 785
Moore, S. G., (134) 401
Moore, T. W., (167) 163
Moorhead, T. G., (2) 163, (22) 1264
Moraes, B., (146) 638
Morales, M., (166) 1675, (174) 1676
Moran, J. F., (97) 783
Morden, M. R., **1726**
Moreau, (69) 1266
Moreira, S., (43) 557
Morel, T., (42) 1191
Moren, J. J., (56) 627
Morestin, H., (60) 1746
Morgan, E., (5) 1324
Morgan, H. J., (138) 243
Morgan, J. D., (114) 698
Morgan, W. E., ***590**
Morgan, W. G., (89) 1494
Morgenroth, J., (81) 1113
Morgenstern, K., (78) 1333
Mori, A., (124) 407
Moriarta, D. C., (9) 1324
Morison, R., (14, 22) 1495
Moritz, M., (25) **556**, (25) 1264
Moro, E., (104) 1037
Morone, G., (124) **952**, (153) 1198
Morpurgo, B., (125) 1405
Morris, N., (1) **1982**
Morris, R. T., **72**, (22) 1027, (114) 1328
Morrison, E. E., ***1280**
Morrison, N. H., (56) 863
Morrison, O. C., (72) 399
Morse, J. L., ***875**, (71) 944, (25) 1260, (42) **1326**, ***1677**
Morse, L. B., (121) 1836
Morse, P. F., (23) 695
Mortimer, J. D., (19) 1264, (10) 1923
Morton, C. A., (47) 631, (7) **864**, (7) 1743
Morton, R. S., (1) **396**, (109) 478
Mosbacher, E., (108) **1269**
Mosby, W. L., (98) 161, (57) 477
Mosny, E., (89) **701**, (56) 1266
Moss, C. J. A., (24) 631
Moss, E., (56) 1589
Moss, J. T., (69) 477
Mosse, M., (81) 1671
Mosti, R., (117) 1589
Mostrom, H. T., (64) 1188
Moskowicz, L., (105) **1588**
Motzfeldt, K., (146) 330, (66) 949
Mouisset, F., (66) **1266**, (75) 1499
Moullin, C. M., (16, 39) 86
Moulton, H., (14) 1739
Moure, E. J., (46) **1985**
Moure, P., (54) 557
Mouriquand, G., (36) **1926**
Mowry, A. E., (64) 1028
Moyer, H. N., **777**
Moynihan, B., (19) 401
Much, H., (83) 792, (137) 952
Muckey, F. S., (64) 628
Muecke, F. F., (20) 1837
Mueller, A., (91) **169**, (103) 478, (130) 485
Mueller, F. H., (89) **1748**
von zur Mühlen, A., (121) 1196
Mühsam, R., (124) 1591, (102) **1841**
Muir, J. T., (20) 1739
Mulholland, J. A., (84) 399
Mullally, E. J., (71) **697**, (28) 1492, (40) 1741, (7) 1979
Müller, A., (91) 249
Müller, C., (138) 1750
Müller, E., (94) **406**, (56) **1926**, (70) 2071
Müller, F., (26) 1109
Muller, H., (56) 1192
Müller, J. E., (94) **1403**
Muller, J. M., (143) 485
Müller, M., (91) 950, (102) 1195, (124) 1673
Müller, O., (108) 1749
Müller, R., (120) 1196, (120) 1336
Mulley, K., (103) 483
Mulot, O. L., (35) **1395**
Mulzer, P., (86) 1113, (54) 1839, (52) 1985, (60) 1986
Mumford, J. G., **77**, **222**, (70) 1262
Mummery, P. L., (1) **864**
Muncey, E. B., **1911**
Munk, F., (79) 404
Munson, E. L., (53) **944**
Münzer, A., (36) 866, (80) 1193, (56) **1839**
Münzer, E., (117) 1673, (98) 1929
Murard, J., (71) 558, (71) 867
Murdock, L. H., (95) 1108
Murison, C. C., (24) 1669
Murlin, J. R., (126) 220
Murod, J., (90) 1500
Muroya, S., (71) 1840
Murphy, A. I., ***995**
Murphy, F. G., (95) 698, (39) 1187, (79) 1834
Murphy, F. T., (23) **941**
Murphy, H. H., (58) 1666
Murphy, J. A., (148) 479, **603**
Murphy, J. B., **1274**, (55) **1585**, (26) **1831**
Murphy, Jas. B., (42) 626, (47) **1261**
Murphy, J. J., (88) 161
Murphy, W. W., (3) **80**
Murray, H. L., (21) 1033
Murray, R. W., (19) **1191**
Musgrave, W. E., (55) **82**
Musser, J. H., (69) **1982**
Mustard, H. S., (102) 1667
Mutch, N., (6) 555
Mutermilch, S., (178) 488, (30) 916
Muthu, C., (36) 480
v. Mutschenbacher, T., (77) 1927
Mutters, J. D., (90) 161
Myers, F. M., (53) 1982
Myers, V. C., (29) 626, (7) **1738**, (85) 1922

N

Nacke, W., (133) 232, (137) 330
Nadal, P., (57) 632
Naegeli, T., (151) 870, (57) **1985**
Nägelsbach, E., (49) 1839
Nagelschmidt, F., (71) **1035**
Nageotte-Wilbouchewitch, M., (61) **1498**
Nagy, S., (140) 1270
Naish, A. E., (33) **556**, (11) 1108
Nakagawa, K., (49) **1111**
Nammack, C. E., (85) 83, (62) 1262, (127) 1328, (65) 1666
Nance, W. O., (57) **398**
Nanta, A., (52) 631, (43) 1838
Narath, A., (84) 168
Nardi, A., (113) 951
Nash, J. B., (5) 629
Nash, J. T. C., (46) 1670, (8) 1923
Nassetti, F., (99) **793**
Natale, P., (145) 1197
Natvig, H., (164) **1198**
Nauwerck, C., (49) 1585
Naville, F., (88) 558
Neel, J. C., (96) **1262**
Neff, I. H., (29) **239**
Neff, M. L., (14) **860**
Neil, W. F., (9) **945**
Neill, W., (133) 401, (100) 785
Neilson, C. H., ***436**, (38) 1832
Neilson, I. L., (152) 479
Neisser, A., (70) 632
Nelken, A., (67) **944**
Nelson, R. M., ***742**, ***1766**
Nelson, W. H., (8) 85
Nemmser, M., (112) **1749**
Nesbit, O. B., (31) 1106
Nesbitt, C. T., ***6**
Nesselrode, C. C., (56) 241
Netter, A., (78) 558
Nettleship, E., (1) **1581**
Neu, H., (100) **1404**
Neu, M., (81) **950**
Neuberger, M., (142) 1674
Neudörfer, A., (131) 637, (83) **1586**
Neugebauer, F., (126) 637, (113) **1588**
Neuhaus, H., (74) 2071
Neuhof, H., ***1701**
Neuhof, S., (116) 1030, ***1064**, (11) **1258**
Neuman, L., (44) **1832**
Neumann, A., (103) 1403, (73) 1840
Neumann, W., (78) 401, (160) 872
Neumann,-Kneucker, A., (107) 1842
Neumayer, V. L., (70) 167
Neupert, R., (117) 13335
Neustaedter, M., (83) 477, ***982**, **1575**
Newberne, R. E. L., (21) 1105
Newburgh, L. H., (47) 1833
Newcomb, J. R., (98) 1923
Newcomet, W. S., (71) 1982
Newell, C. R., (76) 161
Newhard, H. F., **1659**
Newman, D., (31) **1400**, (13) **1837**
Newmark, L., (51) 1028
Newmayer, S. W., (116) 242
Newton, A., (13) **1982**
Newton, H. A. S., (48) 631
Newton, R. C., (66) 319
Ney, E., (60) **325**, (65) 702
Niblett, W. S., (75) **1493**
Nice, C. M., (147) 1329
Nichols, F. H., (82) 1494
Nichols, H. J., ***108**
Nichols, J. B., ***331**, (102) 629
Nichols, J. R., (102) 785
Nicholson, G. W., (20) **786**
Nicloux, M., (56) 867, (56) 1111
Nicola, B., (143) **1197**
Nicolich, (42) 701
Nicoll, J. H., (6) **945**
Nicoll, M., (31) 475
Nicolle, C., (49) **1670**
Nicolle, M., (44) 866, (30) 1330
Nicolson, W. P., (109) 1667
Niemann, A., (171) 1753
Nietner, (51) 87
Nikolaew, B., (162) 1752
Niles, G. M., (103) 399, (80) 753, ***979**, (83) **1492**, (107) 1923
Nimier, A., (82) 558
Nimier, H., (82) 558
Nippert, L. A., (54) 1666
Nixon, J. A., (5) 1329
Noack, F., (151) 873
Noah, J. C., (110) 320
Nobe, W., (106) 705
Nobécourt, P., (51) 247, (49) 1192, (57, 58) **1498**
Noble, A. I., (6) 1663
Noble, T. B., (26) **1185**
Noeggerath, C. T., (172) 1753
Noel, H., (9) **316**
Nogier, T., (73, 75) **558**, (62) 1671
Noguchi, H., (54) **241**, ***362**, (43) **626**, (67) **1188**, (75) **1586**
Noguchi, Y., (46) 166
Noland, L., (11) 316, (94) 783
Nolhia, H., (63) **1193**
Nonnenbruch, W., (118) 1501
von Noorden, C., ***101**, (10) 239, (81) 477, (136) **560**, (71) **633**, (113) **636**, (95) 950, **1379**, (126) **1750**
v. Noorden, K., (179) 488
Norbury, F. P., (61) **1834**
Nordentoft, J., (149) 638, (130) 1589
Nordentoft, S., (149) 638, (130) 1589
Nordmann, O., (87) 1037
Nordmark, V., (122) 1196
Norero, (47) **1192**
Nørregaard, K., (197) **488**, (137) 1590
Norris, C. C., (152) **162**
Norris, G. W., (7) **624**
Norris, H., **152**
Norris, R. C., (145) 479
North, C. E., (7) 1184
Norton, **1069**
Nottingham, R. V., (58) 1834
Novak, E., (88) **84**
Novak, J., (108) **1842**
Nové-Josserand, L., (51) 631
Novoa, R., (125) 251
Nowell, H. W., (14) **1980**
Noyes, C. D., (14) 178
Noyes, F. B., (108) 161
Nuckols, O. P., (53) **1742**
Nuñez, A. S., (182) 1272
Nuttall, G. H. F., (58) **696**, (22) 860
Nyström, G., (133) 330

O

Oates, J. K., (132) 401
Obal, F., (76) 1927
de Obarrio, P., (26) 317
Obata, I., (173) 872
Oberholzer, E., (62) 401
Oberlander, F. M., (8) 474
Obermayer, F., (123) 329
Oberndorfer, S., (109) 1269
Obersteiner, H., (96) **1588**
Obregon, J. G., (168) 1118
O'Brien, J. J., (3) 474
O'Carroll, J., (66) 87, (3) 163
Ochsner, A. J., (82) **1029**
Ochsner, E. J., (8) 1394
O'Connell, M. D., (27) 165
O'Connor, B. J., (105) 161, (50) 1261
O'Connor, J. H., (24) 1919
O'Connor, J. V., (72) 1580
Oczesalski, K., (116) 560
O'Day, J. C., **67**
O'Donnell, J., (74) 319
Oechsner, J. F., (62) 1580
Oeconomos, S. N., (88) **1499**
von Oefele, F., (97) 399
Oehlecker, F., (89) **249**
Oehler, J., (73) 1402
Oehler, R., (107) **328**
Oeri, F., (130) 1116, (72) **1267**
Oertel, H., ***1784**
Oertel, T. E., (27) 861
O'Farrell, J. M., (101) 785
Ogata, C., (24) 165
Ogata, M., (66) 1193
Ogorek, M., (91) 868
O'Grady, C., (66) 1743
O'Hara, H. M., (8) **1031**
O'Hare, J. P., (6) **1979**, (41) 1981
Ohlmacher, A. P., ***1213**
Ohls, H. G., (50) 169
Ohm, R., (118) 91
Oldenborg, H. A., ***654**
Oliva, C., (147) 1116
Oliver, J., (10) 164
Oliver, J. R., (9) 1918
Oliver, P., ***825**
Oliver, T., **1090**
Olivier, R., (68) **1266**, (73) 1499
Ollerensaw, R., (7) 555
Olpp, G., (74) 167
Olsen, N., (107) 698
Olsho, S. L., ***1538**
O'Malley, J. F., (15) 1399
Oman, C. M., (106) 1397
O'Neil, R. F., (18) 860
Oneta, A. A., (129) **1844**
Openshaw, T. H., (25) **244**, (21) 630
Ophüls, W., (1) **1979**
Opie, E. L., (41) 1832
Opitz, H., (92) **633**
Oppenheim, H., (69, 74) 249, (75) **1113**
Oppenheimer, R., (112) 406
Oppenheimer, S., (37) **696**, (113) 1029
Orange, T. W., (109) 1189
Orbison, T. J., ***1954**
Ordway, T., (33) 1981
O'Reilly, A., (47) 1580
O'Reilly, J. J., (129) 85
Orendorff, O., (20) 475
Orenstein, A. J., **610**, (12) 1026
Orland, F., (100) 1037
Orlowski, W., (182) 488
Ormond, A. W., (49) 480
Ormsby, R., (138) 1329
Ornstein, O., (111) 559
Orr, T. G., **742**, (36) 1395, (102) **1835**
v. Ortenberg, H., (114) 1842
Orth, J., (78) **1267**
Orthner, F., (121) 636
Ortin, L. G., (193) 488
Orton, G. H., (3) 1189
Orton, G. L., (132) 699
Orton, S., (136) 85
Orton, S. T., (3) **1663**
Osborn, I. S., (27) 239
Osborne, O. T., **386**, ***1427**, **1913**, ***2039**
Osborne, T. B., (38) **1920**
Oser, E. G., (45) 166
Osgood, R. B., **858**, (46) 1028, ***1611**, **1917**
Osler, W., (25) 1980
Ostenfeld, J., (157) 92
Ostrowski, S., (80) 406, (75) 1986
Oszacki, A., (143) 92, (139) 1116, (68) 1586
Otsuka, I., (92) 704
Ottow, B., (188) 873
Oughterson, W. A., (112) 1263
Oui, (34) **245**
Outerbridge, G. W., (12) 1104
Outland, J. H., (50) **1580**
Overall, J. C., (111) 1263
Overlander, C. L., ***806**
Overlock, S. B., (69) 1107
Owen, E., (4) 864, (21) 865, (31) 1033
Owen, R. G., (69) **1666**
Owen, S. A., (22) 86
Owens, W. D., (161) 479
Owsley, J. G., (50) 1742
Oxenham, H. B., (3) 322
Ozaki, Y., (128) 870

P

Pach, H., (87) 793
Pachon, V., (52) 1332
Packard, G. B., (2) **859**
Packard, H., (88) **783**, [illegible]
Packard, M., (132) 13[illegible]
Paderstein, R., (79) **633**
Page, J. R., (21) 81
Pagenstecher, E., (145) 561, (16 562, (93) **869**
Paglione, V., (148) 1502
Pagniez, P., (62) 632.
Paine, H. L., (35) 1260, (31) **1665**
Pal, J., (89) **327**, (87) 1114
Palazzo, G., (148) 1198
Pallasse, E., (52) 1746
Palmer, J. W., **1731**
Palmer, R. F., (27) 1740
Palmer, W. W., (46) 318, (72) 1023
Palmerlee, G. H., (65) 241
Pancoast, H. K., **473**
Pander, H., (76) 168
Pando, P. J., (162) 1502
Pane, D., (151) 1198
Panhorst, M. H. P., (140) 1030
Pankow, O., (63) **1840**
Panton, P. N., (35) 86
Pantzer, H. O., (17) **695**, (20) 789
Pappenheim, A., (71) 326, (118) 6 (126) 1270
Pappenheimer, A. M., (1) **1184**
Paraf, (50) 247
Paranhos, U., (129) 407, (148) **140** (125) **1589**
Parcelier, A., (65) **1498**
Pari, G. A., (123) **407**, (191) 5 (112) 951
Parisot, J., (58) **1035**
Park, F. E., (49) 944
Park, W. H., (33) **398**
Parker, C. A., ***514**, (1) **550**
Parker, D. W., (30) **239**
Parker, G., (12) 401, (74) 1580
Parker, H. N., (35) 695, **980**, (2 1531
Parker, W. S., (5) **1576**
Parkes, C. H., ***29**
Parlavecchio, G., (149) **1117**, (6 1746
Parmelee, A. H., ***659**
Parounagian, M. B., (89) 1922
Parrish, R. C., ***123**
Parry, A., **77**
Partlow, W. D., (119) 85
Parvu, M., (40) **789**
Pascale, G., (67) **326**
Paschal, F., (111) 1667
Pascual, S., (60) 1671
Pässler, H., (114) **636**
Patek, R., (135) 1337
Paterson, A. M., (11) **946**

Scott, N. S., (27) **1185**
Scott-Carmichael, E., (23) 401
Scribner, C. H., (72) 319
Scribner, E. V., (7) 1663
Scripture, E. W., (44) 862, (52) 1493, ***1601**
Seaman, W., **1574**
Sears, F. W., (132) 85
Sebardt, C., (204) 874
Sébilleau, J., (65) **248**
Sedgwick, J. P., (44) 1187
Seefelder, R., (53) 791
Seel, E., (99) 1841
Seelig, M. G., **238**
Seelos, (74) 1671
Seemann, W. H., (55) 1580
Segale, M., (109) 869
Sehrt, E., (69) 791, (104) **1930**
Sehrwald, E., (111) 1930, (57) 2070
Seidell, A., (63) **318**
Seitz, L., (151) **1751**
Seligmann, E., (106) 869
Sellheim, H., (71) 1193
Sellman, W. A. B., (11) 1324
Semionow, V. P., (80) 1499
Semon, H., (8) 785
Senator, M., (68) 1986
Sencert, L., (36) 700
Senour, W. E., (55) 1262
Senseney, E. T., (71) 477
Senzi, G. E., (97) 169
Sequeira, J. H., (31) 787
Serebrenikowa, O., (74) 482
Sergent, E., (53) **324**
Serralach, D. N., (181) 1272
Serrallach, N., (130) **1038**
Sever, J. W., (35) 239, (93) 629, (44) 782 (34) 1260
Severin, J., (118) **1115**
Sewaki, H., (29) 1330, (37) 1745
Sewall, H., (8) 624, ***2027**
Sexton, J. C., (19) **780**
Sexton, L., (65) 1262, (64) 1580
Sexton, L. A., (7) **940**, (20) 1664
Sézary, A., (48) **790**, (57, 59) 1402
Shaffer, N. M., **65**
Shahan, W. E., (104) 1835
Shambaugh, G. E., (13) 81
Shands, H. R., **1390**, (24) 2067
Sharp, E. A., (49) **1921**
Shattock, S. G., (7) **945**
Shattuck, F. C., (50) 82
Shaw, B. H., (7) 1836
Shaw, C. E., (2) 945
Shaw, G. M., (122) 1328
Shaw, H. B., (1) **1743**
Shaw, [illegible] L. K., (1) 238
Shaw, J. [illegible] (44) 477
Shaw, W. F., (24) [illegible]
Sheahan, F. J., ***826**
Shearman, C. H., (8, 11) 1668
Shears, G. P., (107) **320**
Sheedy, B. DeF., (117) 1328
Sheldon, J. G., **1726**
Shennan, T., (15) 1330, (18) **1744**
Shepard, B. A., (122) 699
Sheppard, J. E., (130) 162
Sherill, J. G., (15) 1324
Sherman, H., (45) 1106
Sherman, H. M., (61) 1028, **2024**
Sherren, J., (32) 1110
Sherrick, J. L., (66) 1188
Sherwood, H. H., (63) 160
Shibayma, G., (111) 1749
Shields, E. H., (91) 242
Shilling-Torgau, V., (15) 244
Shimer, W., ***1950**
Shinnick, E., (92) 1029
Shipman, E. W., (107) 399
Shoemaker, H., (131) 242
Short, A. R., (7) **1329**, (28) **1832**
Shtutzer, M., (122) 1843
Shuman, J. W., (98) 1262
Shuster, E., **127**, **146**
Sibley, W. K., (33) 244, (41) 1110
Sicard, J. A., (50) **324**, (57) **1192**
Sicard, M. H., (53) **1107**
Sicard, M. J., (46) 631
Sieber, H., (112) **1588**
Siebert, K., (129) 91
Siefert, G., (155) 1271
Sievers, R., (98) 704, (136) 1197
Sigaux, G., (49) 324
Siguret, A., (51) 557
Sigwart, W., (72) 1747
Sikora, P., (79) **867**
Siler, J. F., **1823**
Silhol, (42) 1926
Sill, E. M., (88) 1189, (4) **1576**
Silver, D., (156) **243**
Silvestri, T., (94) **169**, (126) 1038, (149) 1198
Simmonds, M., (130) **706**, (164) 872
Simmons, C. C., (13) **1577**
Simmons, G. H., **762**
Simms, B. B., **1388**
Simon, (50) 87
Simon, G., (73) **1267**
Simon, H., (72) 1402
Simon, I., ***1943**
Simon, L., (65) 1402
Simon, R., (1) 243, (7) 1982
Simonds, J. P., (29) 695
Simpson, B. T., (45) 627
Simpson, C. A., **593**, (103) 629, (121) 1264, (146) **1329**
Simpson, G., (13) 865
Simpson, G. C., (4) 401
Simpson, J. W., (30) **402**
Simpson, W. L., (99) 1923
Singer, C., (30) **244**, (19) **1924**
Singer, G., (127) **91**, (65) **404**
Singer, H. D., (70) 241, (62) 1834, ***1874**
Singh, G., (23) 1669
Singley, J. D., (161) 162, (89) 864, ***1535**
Sinushin, N., (121) **1843**
Sippel, A., (117) **870**
Sippell, F., (164) 487, (134) **1116**
Siredey, A., (89) 1500
Sisson, W. R., (33) **1260**
Siter, E. H., (151) **162**, (80) 944
Siven, V. O., (37) 1028
Sjövall, E., (64) 1402
Skeel, A. J., (18) **941**, (14) 1324
Skeel, R. E., (6, 12) **396**, (58) 1326
Skillern, P. G., ***172**, (79) 944, ***1536**
Skinner, E. H., (46) 1580
Skirving, R. S., (3) 85
Skoog, A. L., (58) 1922
Skudro, S., (136) 1674
Slade, C. B., (94) 1494
Slamberg, L., (203) 874
Slataper, F. J., (48) 782
Slaughter, N. G., (66) 83
Slawinski, Z., (141) 1406
Slemons, J. M., (1) **1831**
Sleyster, R., ***1351**
Slye, M., **2020**
Slingerland, I. M., (141) 162
Sloan, M. F., (60) **696**
Sluder, G., ***650**
Sluka, E., (98) 950
Smidt, H., (151) 252
Smiroff, A. W., (75) 2072
Smith, A., (12) **555**, (23) 1033, (18) 1668
Smith, C., (90) **161**, ***895**
Smith, C. H., (44) 81, (19) 1033, (25) 1669
Smith, E. A., (48) 160
Smith, E. T., (7) 629, (1) 1668
Smith, E. V., (7) 474
Smith, F. F. S., (27) 1669
Smith, G. G., (4) 1324, (32) **1740**
Smith, G. S., (24) 239
Smith, H. A., **146**
Smith, H. J., (17) 1395
Smith, H. W., (147) 479
Smith, J. B., (134) 699
Smith, J. L., (24) **1264**
Smith, J. T., (86) **1396**
Smith, L. W., (42) 552
Smith, M., (50) **1187**, (81) 1743
Smith, P., (122) 162
Smith, R. H., (67) 1028
Smith, R. K., (71) 1107
Smith, R. M., (4) 238, (87) 1262
Smith, T., (37) 1260, ***1591**, (36) **1981**
Smith, W., (23) 1740
Smith, W. S., (8) 1324
Smithies, F., (17) **158**, (4) **1025**
Smoler, F., **183**, (77) 1333
Smythe, F. D., **1484**
Snively, J. H., (100) 84
Snodgrass, W. A., (40) 1028
Snow, S. F., (128) 162
Snow, W. B., (95) 629
Snure, H., (69) **1666**
Snydacker, E. F., (87) 1580
Snyder, E. H., (107) 1108
Snyder, F. D., (56) 1326
Snyder, J. R., (128) 1030
Sobotky, I., (51) 696
Söderbaum, W., (136) 952
Söderbergh, G., (134) **1844**
Søegaard, M., (209) 874
Sogge, L., (12) 2066
Sohn, I., (134) 1674
Solieri, S., (37) 1583
Solis, J., (124) 699
Solis-Cohen, S., **1914**
Sollmann, T., (57) 1326
Solly, R. V., (40) **86**
Solomon, M., (120) 162, (60) 1028
Solowij, A., (146) 1406
Soltau, A. B., (26) 1983
Somerset, W. L., (59) 553
Somerville, W. F., (14) 243
Sommer, A., (74) 633
Sommerfeld, A., (59) **1035**
Sommerfeld, P., (87) **1194**
Sommerfeldt, T., (211) **874**
Sondermann, R., (101) 1269
Sonnenfeld, J., (80) 950
Sonntag, E., (101) 869
Soper, A. C., ***1535**
Soper, G. A., (61) 1742
Sorcsi, A. L., (17) 1664
Sorge, (125) **1196**
Soubeyran, P., (33) **1583**, (38) 1926
Souques, A., (42) 1746
Southard, E. E., (68) 399, (4) **1663**
Southworth, F. W., (123) 400
Souttar, H. S., (9) **316**, (1) 1836
Sowers, C. N., (59) 1107
Spaeth, F., (94) 793
Spagnolio, G., (152) 1198
Spalding, C. B., (48) 477, (33) 781
Spangler, R. H., (73) 1262
Spargo, W. W., (53) 1580
Spät, W., (89) 1929
Spaulding, E. R., (4) **1103**
Speck, W., (74) 1840
Speed, K., **935**
Speidel, E., (69) 1188
Spence, J. W. L., (18) **1664**
Spencer, H. N., (73) 863
Spencer, W. G., (3) **555**
Spiethoff, B., (113) **1269**
Spiller, W. G., **1910**
Spire, A., (37) **1496**
Spitzy, H., (107) **1335**
Sprengel, O., (60) 702
Sprinzels, H., (78) **168**
Spuler, A., (114) 560
Squier, J. B., ***1226**
Squire, J. E., (14) 323
Ssamoylenko, M. A., (121) **1270**
Staats, O. M., (83) 1743
Stadelmann, E., (87) **1929**
Stadler, E., (67) **791**
Staehelin, R., (113) 560
Staeubli, C., (76) 404, (79) 1036, (85) **1113**
Stähelin, R., (91) 1334
Stähli, J., (14) 1664
Stange, B., (152) **1117**
Stannus, H. S., (17) 1837
Stanton, E. M., (92) 84
Stanton, J., (9) 940
Stapfer, (46) 1746
Stapler, M. M., (25) 861, (137) 1030
Stapleton, W. J., (42) 1395
v. Starck, W., (86) 406
Stark, H. H., (46) 696
Starr, D., **732**
Stathers, F. R., (3) 940
Stäubli, C., (127) **706**, (47) **2070**
Stauffer, P., (55) 1034
Stavrides, G., (38) 1496
Stebbins, K., (16) 1104
Steele, M. W., (51) 1742
Steenbock, H., (70, 71) 1028
Steffens, P., (158) 871
Steichen, A., (22) 323
v. Steimker, W., (81, 82) 1333
Stein, A. E., (156) **1675**
Stein, A. K., (163) 872
Stein, B., (128) **251**
Stein, J. B., (103) 320, (43) 1982
Stein, O. J., (104) 1328
Stein, R. O., (120) 1336
Steinbiss, W., (168) 1753
Steiner, J., (137) 1270
Steiner, W. R., (81) 83
Steinhardt, E., (42) **1106**
Steinmann, F., (132) **1337**
Stemmler, (96) **1929**
Stender, O., (151) 486
Stenger, A., (11) 239
Stephens, G. A., (13) 555, (19) **1399**
Stephens, J. W. W., (2) 1397
Stephenson, J. W., **1392**
Stephenson, S., (72) 88
Sterling, S., (116) 560
Stern, A., (6) 940
Stern, C., (92) 1114
Stern, E., (87) 1748
Stern, H., (24) **1027**, (58) 1839, (59) 1922
Stern, K., (144) 485
Stern, M., ***973**
Stern, S., (143) **1270**
Stern, W. G., (6) **859**
Sternberg, C., (133) **870**
Sternberg, W., (105) 250, (93) **1037**, (135) **1116**
Stetson, H. G., (134) 85
Stetten, D., (16) **625**, (112) 698, ***1126**
Steuart, W., (21) 1664, (5) 2067
Stevens, J. J., (60) 944
Stevens, M. T., (16) 1026
Stevens, W. E., ***203**
Stevenson, F. C., (9) 85
Stevenson, M. D., (80) 864, (85) 945, (112) 1328, ***2044**
Steward, F. J., (9, 12) 1495
Stewart, D. H., (10) 1324
Stewart, D. M., (48) 1107
Stewart, E., (32) 1260
Stewart, F. T., (19) 625, **2024**
Stewart, G. N., (35, 36) **626**, (36, 37) 1832
Stewart, J. C., **926**, ***1358**
Stewart, J. M., (73) 319
Stewart, W. B., (77) 319
Stewart, W. E., (91) 319, (76) 1743
Stewart, W. H., (31) 1027
Sticker, A., (107) 90, (76) 249
Stiefler, G., (114) 407
Stiel, A., (80) 326
Stierlin, E., (102) 328
Stiles, C. W., **1561**
Stillians, A. W., (52) 1666
Stillson, J. O., (21) 780
Stimson, J. C., (75) 477
Stincer, S. E., (117) 794
Stiner, O., (88) 219
Stirling, G. L., (65) 1580
Stitt, E. R., (153) 479, (35) 1325, **1820**, **1823**
Stivers, C. G., (38) **160**
Stockdale, E. M., (8) 479
Stocker, F., (58) 1586
Stocker, S., (89) **1334**
Stockman, R., (92) **319**, (62) 1188, (8) **1264**
Stockton, C. G., (40) 552, **1573**
Stoerk, E., (87) **1268**
Stoffel, A., (131, 150) **485**, (154) **486**, (77) **792**, (9) 1491
Stoll, H. F., (1) **80**, (44) 1579
Stoll, K. L., (92) 242
Stolte, K., (105) 406, (108) 705, (109) 1196
Stoltzenberg, F. F., (134) 637
Stoltzenberg, R., (134) 637
Stoltz, M., (140) **637**
Stone, H. B., (25, 26) **941**
Stone, I. S., (146) 162, ***656**
Stone, W. J., ***489**, (91) 1108, ***1296**
Stoner, G. W., (86) 1667
Stoner, H. W., (43) 944
Stoner, J. B., (61) 1493
Stoney, A., (7) 699
Stoney, R. A., (14) 1032
Stookes, A., (19) 556
Storck, J. A., (51) **552**, **1487**
Storey, L., (33) 631
Storey, T. A., (31) 159
Stout, T. J., (10) 1577
Stover, G. H., (89) 554
Stowell, E. C., (37) **1106**
Stowell, W. L., (61) 863, (28) 1260
Strachauer, A. C., (44) 318
Strangmeyer, A., (148) **485**
Stransky, E., (94) 1037
Strasburger, J., (45) 2070
Straschesko, N. D., (181) 488
Strasser, E. M., (94) 242
Strassmann, P., (166) 487
Strathy, G. S., (50) 398
Straub, H., (79) 704
Straube, E., (54) **166**
Strauch, A., (7) 238
Strauch, F. W., (116) 636
Strauss, A., (91) 1268
Strauss, H., (71) 949, (124) 1196, ***1410**, (73) 1580, (154) **1674**, (81) **1840**
Street, A., (5) 1982
Street, J. P., ***2037**
Streissler, E., (116, 117) 483
Stricker, N., (110) 1196
Strickland, C., (8) 2067
Strine, H. F., (127) 401
Strisower, R., (169) 562
Ströbel, H., (48) 1670, (47) 1839
Strobell, C. W., **1252**
Stroebell, C. W., (52) 1982
Stroganoff, W., (96) **328**, (77) 1747
Strong, G. R., (42) 86
Strong, R. P., (101, 102, 104-109) **84**, (93) **554**
Strouse, S., (55) 398, (105) 629
Strubell, A., (71) 249
Strunsky, M., ***1152**
Struthers, J. W., (58) 87, (7) 164
Stuart, C. C., (40) 318
Stuart-Low, W., (15) 1261
Stucky, J. A., (118) 242, (54) 1262
Stumm, T. W., (144) 162
Stümpke, G., (93) 1114
Sturm, J., (85) 1586
Sturrock, W. D., (8) 699
Stursberg, H., (76) 792
Stuver, E., **1245**
Suess, E., (141) 1502
Sugget, O. L., (75) 1742
Suggs, L. A., (104) 785
Sugi, K., (95) 406, (168) 488
Sullivan, J. J., (40) 943
Sultan, C., (56) 2070
Sulzer, D. E., (2) 780
Summers, J. E., (15) 239, **316**
Sumner, F. W., (26) 1669
Sumner, W. T., **1025**
Sundberg, C., (47) **1584**
Sunde, A., (161) 1198, (68) 1840
Surface, F. M., (39) 1920
Surnamer, I., (127) 699
Süssenguth, L., (59) 166
Sutherland, P. L., (4) 2067
Sutherland, W. D., (20) 1330
Sutter, C. C., (47) 914
Sutton, R. L., ***115**, (37) **781**, **1339**, ***1774**
Svedin, B., (145) **1338**
Swadener, E. L., **1479**
Swan, J. M., (118) **400**
Swan, R. H. J., (26) 787
Swann, A. W., (6) **1025**
Swayne, W. C., (11) 401
Sweek, W. O., (48) **627**
Sweet, J. E., (77) 1028, (21) **1324**, (93) 1581
Swift, H., (4) 322, **1576**
Swift, H. F., (53) **241**, (67) 1742
Swift, W. B., (25) **551**
Swope, S. D., (71) 1922
Swords, M. M., (116) 162
Swynghedauw, (69) 1499

Sys, L., (144) 408
Symes, J. O., (34) 863
Symes-Thompson, H. E., (87) 324
Symmers, D., ***337**
Syms, P., (59) 1742, (26) **2067**
Syring,-(84) 1333
v. Szontagh, F., (81) **406**

T

Tachau, H., (93) 1403, (96) **1672**
Tachau, P., (71) **1986**
Taddei, A., (101) **793**
Taddei, D., (55) 701
Tadini, A., (163) 1675
Tait, W. D., (32) 1920
Takaki, Y., (32) 709
Takeno, J., (110) 705
Talbot, F. B., **591**, (33) **1260**, (16) **1664**
Talley, J., **666**
Talmey, B. S., (79) 1922
Tamassia, A., (109) 951
Tanaka, H., (47) 1111
Tandler, J., (69) 791
Tanfani, G., (115) **1842**
Tansini, I., (125) 407, (124) **952**
Tasca, P., (208) 1754
Tatum, A. L., (96) 319, (15) 2066
Taussig, A. E., (10) **1979**
Taussig, F. J., (133) **821**, (9) 694, **1735, 1738**
Tausz. B., (140) 1116
Tavernier, L., (68) 867
Taylor, A. E., (47, 48) 1665
Taylor, A. S., **1392**
Taylor, C. B., (83) 161
Taylor, E. C., (24) 323, (30) 1669
Taylor, F., (67) 88
Taylor, G. H., (2) 85, (70) 399, (5) 1668
Taylor, H. L., (3) **859**
Taylor, J. M., (28) 1027, **1811**
Taylor, J. W., (13) 401
Taylor, K., **1094, *1142**
Taylor, R. T., (82) **1922**
Teague, O., (102-109 112) **84**, (42) **1920**
Teass, C. J., (54) 1326
Tedesko, F., (145) **707**
Teixeira, S., (127) 952
Teleky, L., (124) **1336**
Telling, W. H. M., (39) **1400**, (1) 1923
Tenani, O., (158) 708, (164) 1271
Tenney, B., (44) 1028
Tenney, C. F., (82) 864
Terrell, T. C., (91) **399**
Terrien, E., (62) **1266**, (32) **1926**
Terrill, J. J., (102) 1108
Terry, C. E., (10, 15) 1492
Teschemacher, (149) 1674
Teumin, S., (124) 1843
Thatcher, P. B., (126) 162
Thayer, A. E., (73) 783
Thayer, W. S., (121) 478, (22) 625
Thedinga, W., (104) 1195
Theilhaber, A., (167) **562**, (83) **1113**
Themner, K., (14) 1837
Thibaut, (83) 89
Thiele, F. H., (31) **631**
Thiemich, M., (154) 562, (93) **1403**
Thies, A., (137) 637
Third, J., (27) 1492
Thoma, R., (164) 1753
Thomas, B. A., ***185, *1070**
Thomas, C. P., (47) 696
Thomas, E., (119) 497
Thomas, G. J., ***184**
Thomas, G. W., (5) 1494
Thomas, H. A., **308**
Thomas, H. M., (87) **697**
Thomas, J. B., (19) 1027
Thomas, J. J., (37) 552
Thomas, J. L., (21) 401
Thomas, J. N., (76) 1667
Thomas, T. T., (20) 625, (10) 1025, (15) 1258
Thompson, H. E., (57) 1742
Thompson, J. E., **151**, (31) **1832**
Thompson, L. O., (5) **1979**
Thompson, M. G., (42) 240
Thompson, S. E., (28) 1740
Thompson, T., (45) 480
Thompson, W. G., (111) **698**, (59) 782, (63) 1666
Thompson, W. N., **67, 228**
Thomson, A., **2022**
Thomson, D., (7, 8) **1397**
Thomson, E., (26) 556, (16) 786
Thomson, E. S., (138) 162
Thomson, F. G., (9) 864
Thomson, G., (38) 631
Thomson, H. C., (28) 700
Thomson, H. H., (2) **1743**
Thomson, J. G., (5) 401, (8) **1397**
Thomson, S., (58) 402, (47) 480
Thorborg, F., (128) 1589
Thornburgh, R. M., (34) **81**
Thorne, L. T., (42) 1111
Thorne, M., (11) 322
Thorne, W. B., (10) 1108
Thörner, W., (48) 1985
Thorning, W. B., (98) 1108
Thorspecken, O., (103) 1749
Thrash, E. C., (118) 1836
Thrasher, J. R., (30) 1920
Thulstrup, W., (149) **252**
Thurlow, E. A., (133) 478
Thursfield, H., (24) 700, (2) 1189
Thwing, C. F., **774**, (63) 1326
Tidy, H. L., (35) 86, (15) 1982
Tièche, (61) 404
Tierney, J., **238**
Tietze, A., (118) 484, (70) 703
Tilley, H., **259**
Tilmann, O., (107) 250
Timme, W., (33) 861, (52) 1921
Tinel, J., (62) **1111**
Tirumurti, T., (30) 1838
Tisserand, G., (70) **558**
Tissier, L., (57) 867
Tissier, T., (57) **1111**
Tixier, L., (74) 867, (34) **1191**, (57) 1498, (70) **1499**
Tobias, E., (79) 1402, (37) 2069
Tocco, E. L., (144) 92
Ted, H. F., (24) 1583
Todd, C. E., (1) 322
Todd, H. C., (131) 478
Todd, J. L., (49) 161
Todd, R. R., (110) 1923
Todd, R. S. E., (11) 1668
Todd, T. W., (14) 1191, (21) 1983
Toft, E., (152) 252
Toida, R., (74) 1333
Tomarkin, E., (86) 558
Tomlinson, H. A., (11) 551
Tooke, F., (27) 397
Tooth, H. H., (9) 620
Torek, F. J. A., **1252, *1533**
Torelli, Q., (141) 252
Torgersen, P., (216) 564
Torian, O. N., (32) 1106
Torrance, G., (125) 85, (16) 1324
Torrance, L. B., (136) 699
Torrey, J. C., (46) 627
Torrey, R. G., (97) **1581**
Tortora, M., (95) 793
Touart, M. D., ***1620**
Tourneaux, J. P., (53) 1266
Tousey, S., (110) 161, (95) 1189, (25) **1664** (68) 1666
Touton, K., (103) 1500
Towle, H. P., **591**
Townsend, W. R., **1575**, (29) **2067**
Tracy, S. E., (5) 396
Trask, J. W., (16) 1831
Traugott, M., (105) 951
Trautmann, E., (156) **1752**
Traver, A. H., ***44**
Travvassos, L., (198) 873
Trazzi, N., (155) 708
Treadgold, C. H., (21) 479
Treadway, W. L., (43) **1832**
Tredgold, A. F., (11) 1744
Treon, F., (75) 1327
Trerotoli, G., (140) 1338
Treupel, G., (119) 1749
Trewin, J. K., (75) 1834
Triboulet, H., (50) 247, (50) 1034, (62) **1498**
Trimble, G. B., (149) 479
Triplett, J. S., (103) 1835
Troell, A., (144) **1338**
Troisfontaines, P., (54) 1401
Troisier, J., (60) 482
Trotter, W., (21) **1583**, (36) 1669
Trout, H., **151**
Trowbridge, E. H., ***429**
Truche, C., (44) 866, (50) 1670, (28) 1926
Trudeau, E. L., (49) 627
Truesdale, P. E., (24) **551**
Trumpp, (82) 406, (52) **2070**
Tsiminakis, C., (129) 251
Tsiwidis, A., (162) 872
Tubby, A. H., (15) 630, (14) 699, (13) 1744
Tucker, B. R., (145) 1329
Tucker, E. F., (129) 478
Tuckerman, J. E., (12) 780
Tuckerman, W. C., (19) 941
Tuffier, T., (94) **90**, (49) **1926**
Tuley, H. E., (97, 102) 161, (76) 1189, (17) 1324
Tullidge, E. K., (45) 944
Tully, E. J., (59) 83
Tunnicliff, R., ***1781, *2033**
Tunstall, R., (144) 479
Tupper, P. C., (114) 478
Turck, R. C., (104) 1262
Turnbull, H., (17) **946**
Turner, A. L., (26) 401, (13) 786
Turner, D. F. D., (11) 1264, (37) 1265, (22) 1664
Turner, J. A., (24) **1983**
Turner, J. G., (36) 1400
Turner, J. W., (103) 161
Turrettini, G., (58) **1332**
Tweedle, A. R., (25) **1399**
Tweedy, E. H., (15) 556, (43) **631**
Twitchell, H. F., (79) 399
Tylecote, F. E., (11) **1836**
Tyler, G. T., (153) 1329
Tylor, C., (10) **629**
Tyovity, N., (83) 1927
Tytler, W. H., (46) **1261**
Tyzzer, E. E., **2021**

U

Udvarhelyi, K., (73) 1927
Uffenheimer, A., (78) 326
Uffenorde, W., (91) 1587
Uffreduzzi, O., (103) **951**, (72) 1333, (40) 1497, (55) **1926**
Uhlenhuth, P., (63) **404**, (86) 1113, (87) 1672, (54) 1839, (69) **1986**
Ullmann, K., (172) 872
Ulrich, H. L., (39) **477**
Ulrici, H., (112) 90
Umbreit, A. C., **777**
Underhill, A. J., ***1073, *1869**
Underwood, F. J., **1485**
Unger, E., (86) 327, (71) **1035**, (89) 1268, (52) **1927**
Unger, L., (120) 251
Ungermann, E., (121) 91
Urena, P. G., (104) 1599, (88) 1929, (49) 1985, (26) 2069
Unterberg, H., (79) 1927
Upshur, J. N., (72) 1742
Urizio, L., (111) 1674
Urrutia, (51) 867
Usener, W., (120, 121) 407, (96) 1195
Uspensky, N., (123) **1843**
Ustvedt, Y., (133) 1932
Utean, (63, 65) 1671
Uthmöller, (153) **11**[illegible], (114) 1812

V

Vail, D. T., (1) 780
Vallet, (100) 90
de Valcourt, (59) 247
Valin, H. D., (164) 163
Valk, F., (111) 243
Vallardi, C., (166) 872
Van Alstine, E., **2021**
Van Bisselick, J. W., (62) 558
Van Buren, G. H., (21) 1831
Vance, A. M., (9) 158, **236**
Van Couwenberghe, A., (40) 1584
Van Dam, J. M., (95) 1500
Van de Kasteele, R. P., (103) 1335
Van den Bergh, A. A. H., (49) **948**
Vander Bogert, F., ***363**
Vandergrift, G. W., (100) 399, (46) 862
Van Derslice, J. W., (56) 398
Van der Veer, A., (1) 1918
Vanel, S., (59) 1746
Van Epps, C., (99) **698**
Van Hook, W., (155) 162, (90) **697**
Van Poole, G. M., (59) 944
Van Rensselaer, H., (3) 694
Van Slyke, D. D., **1183**
Van Slyke, L. L., (81-85) 1327
Van Stockum, W. J., (134) **92**
Van Sweringen, B., (31) 552, (10) 1831
Vanverts, J., (89) 89, (101) **90**, (52) 557
Van Voast, P. M., (135) 1328
Van Zandt, I. L., (130) 85
Vanzandt, T. K., (104) 161
Van Zwalenburg, C., (90) 1396
Vaquez, H., (97) **90**, (50) 631, (53) **1497**
Vaquié, G. E., (77) **558**
Variot, G., (63) 867, (31) 1191, (59) 1266, (60) **1498**, (35) **1926**
Vason, B., (81) 2072
Vaudescal, M., (58) 867
Vaughan, G. T., (15) **1104**
Vaughan, J. W., ***435**
Vaughan, V. C., (2) **624, 1058, 1174**
Vaughn, F. A., (82) 945
Vaz. R., (105) 794
Veasey, C. A., (62) 783, (76) 1396
Veau, V., (48) 247
Vecchi, A., (185) 488
Vecki, V., (47) 1326
Vedder, E. B., (94) **554**, (104) **1581**
Veeder, B. S., (6) 80
Veiller, L., (26) 695
Veit, J., (180) **562**, (65) 1035, (78) 2072
Veit, K. E., (108) 406
v. Velebely, T., (61) 1927
Velican, C., (123) 706
Vennat, M., (37) 1984
Vento, R. P., (106) 170
Veraguth, O., (74) 326
de Verbizier, A., (69) 1671
Verdi, W. F., (51) 1921
Verdon, H. W., (32) 631
Verel, R., (18) 865, (15) 1837
Verger, H., (53) 1192, (66) 1498
Vergues, E., **1241**
Verhaeghe, E., (43) **246**, (54) **1266**
Verhoeff, F. H., ***727**, (35) 1028
zur Verth, M., (111) **1404**
Vervoort, H., (131) **706**
Vetlesen, A., (183) **1676**
Vianna, G., (105) 170, (147, 151) **1406**
Vignard, (51) 1746
Villard, E., (69) 558, (68) 867
Villaret, M., (19) **2069**
Villazon, N. M., (162) 708
Vincent, B., **74**, (18) **317**
Vincent, G. E., **774, 1443**
Vincent, W. H., (25) 1191
Vinton, M. M., (55) 1107
Violet, H., (56) **247**, (54) **1192**, (90) 1500
Virenque, M., (58) **1111**
Vital-Badin, P., (42) **1497**
Vitry, G., (95) 90, (57) **1402**
Vöchting, K., (108) 1749
Voeckler, T., (110) 1502
Vogel, K., (98) 1269, (152) **1751**
Vogel, K. M., (5) **624**
Vogt, E., (185) 563, (125) 706, (111) 1588 (75) 1747
Vogt, H., (56) 404, (89) **1587**
Voigt, J. C., (23) 1109
Volfring, S. F., (88) **1987**
Voll, A., (92) 950
Voltke, A., (86) **1987**
Voorhees, I. W., (89) 84, (33) 1740
Voorhees, S., (27) 2067
Voorhoeve, N., (98) 1749
Vorpahl, K., (109) 406, (43) 1584
de Vries Reilingh, D., (144) 1116
Vromen, M., (177) 562
Vulpius, O., (112) 1196, (120) 1501, (71) 1586, (102) 1672, (43) 2070
Vystavel, A., (100) 950

W

Wachenheim, F. L., (4) 2066
Wachtel, S., (65) **949**
Wade, E. M., (27) **475**
Wadham, F. J., (26) 1583
Wadsworth, T. W., (42) 1670
Wagner, (119) 1404
Wagner, A., (125) 870, (128) 1116
Wagner, G., (115) 1196
Wagner, J., (132) 242
Wahle, P., (112) 1037
Waibel, C., (118) 1196
Waite, H. H., (28) 475
Wakeman, A. J., (40) 1665
Wakisaka, (22, 23) 165
Wakulenko, J., (71) 482
Walb, H., (83) 1194
Wald, L. D., (77) 242
Waldmann, A., (91) 1403
Waldo, R., (74) 553
Waldron, L. V., (19) 1664
Waldstein, E., (120) 705
Walker, C., (18) **1495**
Walker, E., **850**
Walker, H. D., (102) **242**
Walker, J. B., (28) [illegible]1, (51) 782
Walker, J. T. A., **388**, (48) 398, (45) 782
Walker, J. W. T., (33) 1400
Walker, K. M., (20) **865**
Walker, O. C., (37) 1832
Wall, C., (21) 86
Wall, G. A., (88) 319
Wall, J. T., (16) 158
Wall, M., (145) **1751**
Wallace, A. J., (41) **86**, (17) 556 (30) 866, (12) 946
Wallace, C. S., (38) 1265
Waller, A. D., (29) 1983, (10) 2068
Waller, H. E., (35) 1838
Wallfield, J. M., (79) 1262
Wallich, V., (35) **245**
Walsh, D., (29) 866, (15) 1923
Walsh, J. J., (117) 242
Walters, F. R., (28) 480
Walther, (53) 1670
Walther, E., (165) 1753
Walton, A. J., (14) 316
Walton, G. L., (47) 81
Walton, W. J., (149, 150) **162**
Wangerin, W., (131) 1750
Warbrick, J. C., (117) 698
Ward, E., (36) 1110
Ward, G. G., (54) 1982
Ward, G. R., (27) 1109
Ward, S. B., (30) 1027
Ward, W., (21) **1185**
Warden, C. C., (34) 475
Warhurst, M. A., (79) 1743
Warnekros, (76) 482
Warner, A. R., ***738**
Warren, B. S., **1572**
Warren, G. A., (31) 1740
Warren, G. W., (93) 84
Warren, S. P., (8) 694
Warschauer, O., (55) 166, (75) 1840
Wasserthal, (51) 1497
Wasteneys, H., (41) 1665
Waterhouse, R., (2) 1329
Waters, B. H., (119) 242
Waters, E. E., (19) 1330
Wathen, J. R., (52) 477
Wathen, W. H., ***714**, (63) 1834
Watkins, E. D., ***1357**
Watkins, W. W., (45) 696
Watson, C., (32) 480, (10) 1264
Watson, C. G., (44) 489
Watson, E. B., (95) 1494
Watson, E. M., (49) 240, (82) 1325
Watson, F. C., (11) 316
Watson, F. S., (22) **317**
Watson, H. F., (24) **1330**, (17) 1665
Watson, L., (127) 478, (107) 1189, (129) 1328, (77) 1743, (25) 1832

Watson, W. T., (45) 398
Watson-Wemyss, H. L., (16) 1399
Watt, C. C., (57) **552**
Watters, W. H., *1516
Watterson, W. H., (66) 398
Wats, S. H., (131) 1030
Waugh, W. F., (191) 488
Weatherbee, P., (49) 398
Weaver, E. M., (70) 1396
Weever, J. S., (99) 1835
Webb, F. A., (118) 85
Webb, H. G., (37) 1838
Weber, A., (77) **1102**
Weber, F. P., (28) 556, (10) **864**, (1) **1189**, (18) 1330, (55) **1497**, (9) **1836**, (25) 1837, (29) 1838, (21) 1924, (3) 2067
Weber, H. C., (29) 781
Weber, L., (14) 1493
Weber, O. H., (97) **1749**
Weber, W., (99) 1334
Webster, J. C., **226**, **1787**
Webster, W., (72) 697
von Wedel, C., (131) 478
Weed, L. H., (59) **696**
Weeks, J. E., (149) 243, (96) 1667
Weeks, S. M., (42) 696
Wegele, K., (114) **705**
Wegerer, F., (111) 1673
Weibel, W., (91) **1262**, (70) 1717
Weichardt, W., (73) 167
Weichert, M., (72) **633**, (72) 703
Weidenreich, F., (64) 167
Weihrauch, K., (65) 1840
Weil, A., (89) 1402, (63) **1498**, (34) 1926
Weil, M. P., (76) 1671
Weil, P. E., (69) 1113
Weil, R., (57) **1187**, **2020**
Weil, S., (75) **1193**
Weiland, W., (74) **791**, (142) 1562
Weill, (97) 328
Weill, A., (52) 247
Weill, E., (36) **1926**
Weinzirl, J., (19) 1027
Sna.. H. B., (40) **402**
Shamba, W., (65) 398
Shands, E., (66) 7[illegible]2
Sharp, E., (9) **396**
Shattock, (73) 791
Shattuck-g, S., (125) 91
Shaw, P., (124) **484**
Shaw, C., (57) 948
Shaw, C. E., (106) 399
C. V., (22) 1259
J. R., (129) 720
man, C., **1823**, **1[illegible]24**
lls, B. H., (83) 1107
ells, C. H., (14) 1026
Wells, H. G., *887, (38) **1920**
Welsh, D. A., (4) 1668
Welter, A., (101) 869
Welz, (90) 1587
Welz, W. E., (67) 241
v. Wenczel, T., (64) **1927**
Wenglowski, R., (45) **917**
Werder, X. O., (1) 157, (94) **1262**
Werelius, A., *643, (84) 783
Werneck, C., (149) 1406, (210) 1754, (85) 2072
Werner, H., (116) 870, (76) 1586
Werner, N. L., (17) 1577
Werner, R., (79) **1267**
Wersilowa, M. A., (75) 168
Wertenbaker, C. P., (56) 1834
Werth, J., (126) **1931**
Wertheimer, H. G., (100) 1189
Wesbrook, F. F., *1199
Wescott, W. C., **388**
Weselko, (70) 1586
Wessler, H., (14) 1258, (39) **1832**
Wesson, M. B., *1069, (73) 1107
West, C. J., (89) 1327
West, H. H., (81) 628
West, J. M., (29) **2069**
Weston, W., (127) 1030
Westphal, A., (78) **1671**
Westphalen, F., (123) 1038
Westphalen, H., (136) 485
Wethered, F. J., (10) 1495
Wetherill, H. G., (62) 83, *983, **1533**
Wetterer, J., (92) 249
Wetterstrand, G. A., (129) **1501**
Whale, H., (5) 785, (22) **865**
Whalen, W. E., (85) 1262
Wheat, R. F., **1732**
Wheaton, C. [illegible] 1834
Wheeler, E. [illegible]
Wheeler, W. I. de C., (13) 1582, (41) 1670, (6) 1836
Wherry, G., (3) 1982
Wherry, W. B., (61) **627**
Whinery, S., (5) 1184
Whipple, G. C., (28) 695
Whipple, G. H., (25, 26) **941**, (13, 14) **2066**
Whitall, J. D., (127) 242
Whitbeck, J. F. W., **1483**
Whitby, C. J., (15) 1668
White, C., (22) 1109, (12) 1744
White, C. A., (22) 780
White, C. J., (69) 160
White, C. Y., *990
White, E. C., (105) 1397
White, E. P. C., **473**
White, F. W., (30) 1186
White, J. H., (7) **1025**
White, J. M., (95) **84**
White, P. D., (8) 1258
White, W. A., (6) 624
White, W. C., (32) 159, (50) 477, **1571**, (30) **1980**
White, W. H., (22) 556, (42) 631, **680**, (4) **1190**, (18) 1181, (30) 1983
Whiteford, C. H., (20) 556, (28) 1033
Whitehouse, B., (29-31) 1264
Whitelaw, T. H., (47) 160
Whiteside, G. S., (2) 316
Whiteside, G. W., (65) 83
Whiteside, J. D., (42) 318
Whitfield, A., (25) **244**
Whiting, A. D., *123
Whiting, A. J., (50) 480, (32) 866
Whitla, W., (1) 2067, (9) 2068
Whitman, R., **1916**
Whitman, R. C., (15) 780
Whitmore, E. R., **1823**
Whitney, R. L., (5) **1663**
Whittingham, H., (18) **1495**
Wholey, C. C., **688**, (107) 785
v. Wiczkowski, J., (132) 1674
Widal, F., (53) 1670, (58) 1671
Widerøe, S., (215) **564**, (179) **1676**
Widmer, C., (95) 1037
Wiechowski, W., (135) 92
Wieman, H. L., (8) **1918**
Wiemann, (70) 1840
Wiener, A., (71) 1493
Wiener, E., (166) 1842
Wiener, J., (36) 81, *1526
Wiener, R. G., (58) **782**
Wiesel, J., (135) 1270
Wieting, (61) 166, (155) **1675**
Wigert, V., (110) 408
Wilber, C. I., (15) 1831
Wilborts, A., (54) **631**, (64) 1266, (41) 1400
Wilbouchewitch, M., (62) 867
Wilbur, C. L., **777**, **778**
Wilcox, D. C., (2) 1393
Wilcox, H. B., **547**, (2) **1324**
Wilcox, R. W., **1913**
Wilcox, W. F., **1912**, **2021**
Wile, I. S., (71) 628, (115) 1030, (25) 1492, (18) 1980
Wilke, (119) 1270
Wilkinson, J. G., (120) 400
Wilkinson, W. C., (38) **480**
Willard, D. P., (143) **1329**
Wille, H., (146) 330, (163) 1198
Willett, T, *1878
Williams, A. W., (100) 478, (65) 696
Williams, E. C., (15) 401
Williams, E. H., (85) 1189
Williams, E. M., (91) **783**, (64) **944**, (24) 1395
Williams, F. H., (74) 1493, *1694
Williams, H. M., (128) 478
Williams, J. T., (32) **1186**
Williams, J. W., (11) 164, (12) 479, (113) 1397
Williams, L. R., (67) 553
Williams, P. F., (22) **1185**, (88) **1396**, (57) 1982
Williams, T. A., (165) 163, (104) 629, (38) 696, (43) 782, **926**, (106) 1029, (75) 1262, (122) 1264, (12) 1398, (31) 1496, (37) 1665
Williams, T. W., **769**
Williams, U. V., (97) 1029
Williamson, H., (25) 86, (17) **1983**
Willmoth, A. D., (96) 242, (49) 477, (79) 1189
Willour, L. S., (133) 699
Wills, T. J., (68) 83
Wilms, M., (131) 329, (165) **487**, (111) **1196**, (128) **17**[illegible]
Wilson, A. R., (11) **620**
Wilson, C., (9) 699
Wilson, D. S., (87) 1835
Wilson, H. A., **1917**
Wilson, J. A., (22) 1399
Wilson, J. G., (50) 696
Wilson, J. M., (81) 783, (128) 1836
Wilson, L. B., (25) **81**, **236**, (115) **478**, (90) 1262, (26) **1324**
Wilson, M. A., (31) 475
Wilson, R. L., (69) 783, (124) **1030**, (73) 1982
Wilson, S. M., (55) **1395**
Wilson, T., (33) 86, (26) 1264
Wilson, T. G., (1) 1031
Wilson, W. J., (75) 1666
Wiltshire, H., (17) **786**
Wimberly, G. W., **1558**
Wimmer, A., (114) 1673
Winckel, M., (111) 328
Windle, W. S., (97) 698
Winfield, J. M., (101) 1328
Wing, P. B., (64) 1396
Wingrave, W., (70) 88
Winslow, L. F., (34) 1838
Winter, F. A., (94) 478
Winter, H. L., (15) 158
Winternitz, M. C., (17, 18) **2066**
Winthrop, G. J., (75) 783
Winthrop, J. D., **1389**
Wise, F., (103) 698
Wise, K. S., (31) 165
Wiseman, W. A., **68**
Wishard, W. N., (26) 1105
Withers, W. A., (69) **1028**
Witherspoon, J. A., **776**, (87) 1029
Wit, W. H., (84) 242
Witte, M. E., (9) **551**
Wittek, A., (111) **483**
Wittich, (115) **1501**
Witzel, O., (112) 1269
Witzinger, O., (182) 873
Wladyczko, S., (30) 1926
Wodehouse, R. E., (25) 1105
Wohlgemuth, J., (80) 1113
Wolbach, S. B., (29) 1665
Wolbarst, A. L., (62) **863**
Wolf, E., (26) 2069
Wolf, J., (105) 90, (72) 249
Wolfe, C. T., (68) 1188
Wolfe, D. H. H., (70) 1188
Wolfermann, S. J., (98) 1835
Wolferz, R., (128) 1674
Wolff, (152) 1270
Wolff, A., (90) 169, (79) 950, (52) 1955
Wolff, A. O., (219) 564
Wolff, B., (170) 488
Wolff, F., (73) 249, (179) 562, (54) 948
Wolff, G., (88) 704
Wolff, H., (141) 1116
Wolff, L., (143) 408
Wolff, M., (53) 398
Wolff, P., (126) 870
Wolff, S., (97) 1195, (74) 1986
Wolff, T. R., (4) 316
Wolff-Eisner, A., (59) 918
Wolffheim, W., (185) **1753**
Wolfsgruber, R., (125) **636**, (69) 791
Wolfsohn, G., (111) 90, (99) 633
Wolfsohn, J. M., *1201, *1855
Wolfstein, D. I., (68) **241**
Wolkowitsch, N., (83) 950
Wollman, E., (33) 1330
Wollstein, M., (29) **941**, **1183**, (42) **1261**
Wood, A., (79) 83
Wood, C. M., (63) 1028
Wood, F. C., **1250**
Wood, F. L., (79) 88, (40) 1400
Wood, F. M., (54) 398
Wood, H., **1250**
Wood, H. G., (3) 1831
Wood, J. W., (10) 81, (103) 1328
Wood, N., (31) 480
Wood, N. K., (36) **239**
Wood, P. R., (76) 1834
Wood, W. C., (111) 1328
Wood-Jones, F., (23) 1191
Woodling, M. E., **2060**
Woodman, E. M., (3) **785**
Woodruff, J. B., (94) 399
Woods, A. H., (32) **861**
Woods, H., *1762, (130) 1836
Woodward, H. M. M., (17) 693
Woodyatt, R. T., (19) **158**
Work, H., **77**, **153**, **357**
Wörner, H., (101) 1749
Worrall, E. S., (33) 1983
Worthington, H., (89) 1581
Wossidlo, E., (71) 791
Wright, A. E., (19, 26) 244
Wright, A. L., (72) 399
Wright, B. L., (40) **862**
Wright, F. R., (74) 1327
Wright, G. H., (53) 693
Wright, H. L., (78) 1743
Wright, J., (33) 913
Wright, O. B., (111) 1835
Wright, S. E., (65) 1336
Wrigley, P. R., (25) **556**
Wronker, B. M., (2) **2066**
Wulff, E., (153) 486
Wurtz, R., (60) 867
Würtzen, C. H., (157) 1198
Wyatt, J., (13) 479
Wyeth, G. A., (89) 1667
Wylder, M. K., (57) 863
Wylie, C. B., (144) 1030, (129) 1836
Wynn, W. H., (14) 1744
Wynter, W. E., (23) 1983
v. Wyss, H., (80) 1037, (95) 1403

Y

Yakoyama, Y., (127) 1270
Yamagiwa, R., (50) 1111
Yankauer, S., (81) 399
Yates, W., (23) 695
Yawger, N. S., (38) 1665
Yearsley, M., (8) 81, (11) 1495
Yeatts, S. T., (50) 1493
Yemans, H. W., (104) 478
Yerington, H. H., (64) 696
Ymaz, L., (89) ***1988***
Yorke, W., (6) 243, (8, 9) 401
Young, A., (4) 1108
Young, C. S., (95) 478
Young, E. H., (104) 1923
Young, G. B., **1245**
Young, G. P., (38) 1100
Young, H. H., *253
Young, H. M., (38) **781**
Young, J. H., (47) 1028
Young, S. W., (40) 1260
Young, W. H., (45) 477
Yount, C. E., (26) **1740**
Youtsey, T. J., (104) 1029
Yuan Shi K'ai, **1820**

Z

Zaaijer, J. H., (101) 1500
Zabel, B., (99) **250**
Zadek, I., (65) 325
Zahn, F., (69) **167**
Zak, E., (123) 329
Zalla, M., (100) 793
Zaloziecki, A., (123) 1749
Zander, P., (146) 561
Zangemeister, W., (109) ***1749***
Zapf, L., (134) 870
Zapffe, F. C., *1285
Zaretzky, S., (175) 562
Zaufl, M., (119) **251**
Zarzycki, S., (121) 636, (131) 1196
Zaun, J. J., *664
Zehner, L., (64) 404, (78) 1193
Zell, A. M., (44) 240
Zeller, G. A., (70) 1834
Zenner, P., *357
Zentler, A., (39) 696
Zentmayer, W., (140) 478, (6) 780, **1075**, **1562**, **1781**
Zentner, J., (73) **1986**
Zesas, D. G., (108) **1500**
Ziegler, C. E., *82, (5) **158**
Ziemann, H., (115) 869
Ziemke, (40) 2070
Zimmern, A., (39) 1984
Zink, (110) 328, (69) 632
Zinsser, A., (74) **1193**, (109) **1588**
Zinsser, H., (33) **626**, (40) 1260
Zipper, J., (92) 483
Zitronblatt, A., (91) 1037
Zografides, A., (130) **329**, (115) 407
Zondek, M., (106) 559, (142) 637
Zöpffel, V., (88) 1587
Zuber, (61) **1266**
v. Zubrzycki, J., (174) 562, (125) **636**, (60) 791
Zuccola, P. F., (150) 92, (143) 252, (204) 1751
Zucker, T. F., (35, 36) **626**
Zugg, C., (31) 1579
Zulleg, J., (79) 1333
Zuntz, L., (89) 868
Zweifel, P., (119) **705**

MEDICAL CO
JAIPUR

Pages	No.	
1- 92—	1	[illegible]
93- 170—	2	[illegible]
171- 252—	3	Jan. 18
253- 330—	4	[illegible]
331- 408—	5	Feb. 1
409- 488—	6	Feb. 8
489- 564—	7	Feb. 15
[illegible]—	8	Feb. 22
639-[illegible]—	9	March 1
[illegible]-794—	10	March 8
795- 874—	11	March 15
875- 952—	12	March 22
953-1038—	13	March 29
1039-1118—	14	April 5
1119-1198—	15	April 12
1199-1272—	16	April 19
1273-1338—	17	April 26
1339-1406—	18	May 3
1407-1510—	19	May 10
1511-1590—	20	May 17
1591-1676—	21	May 24
1677-1754—	22	May 31
1755-1844—	23	June 7
1845-1932—	24	June 14
1933-2026—	25	June 21
2027-2096—	26	June 28